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OCCUPATIONAL SKIN DISEASE—A PREVENTABLE DISEASE AND A CHALLENGE TO MODERN PREVENTIVE MEDICINE*

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THE medical books of the ancients depicted various skin diseases, and early in the sixteenth century scabby lesions and ulcerations were mentioned in connection with laborers in metal work and salt mining. About 1700, Ramazzini made the first real contribution to occupational dermatoses by describing with considerable accuracy the skin eruptions of bakers, farmers, washerwomen and many others. In 1775 the first English contribution by Robert Wilan appeared, though Percival Pott had described the cancer of chimney sweepers some time before this work was published. Alibert, early in the nineteenth century, contributed the first French article on this subject, while the Germans began their interest in this field about 1840. In this country much attention has been given to the subject in the last forty years, but the menace of occupational skin disease still exists. In spite of the betterment of working conditions in general, the advances in medical knowledge and the increase in research facilities in business and industry, diseases of the skin due to occupational factors continue to appear far too frequently. It is encouraging, however, that there is an increased interest in such conditions by business executives, insurance officials and other groups. Some states have passed laws requiring that occupational disease cases be reported, and the U. S. Public Health Service, I understand, has detailed one of its officers for a study of this group of cases. Furthermore, a committee from the Section on Dermatology and Syphilology of the American Medical Association has been appointed for the study of these skin conditions. In planning an attack on this menace, there will be need for much teamwork on the part of business executives, safety engineers, labor, the medical profession, the U. S. Public Health Service, state agencies and so forth.

That these conditions constitute a real menace is shown by numerous statistics of their occurrence. In 1912 Fordyce reported that 2 per cent of all skin cases were occupational in origin. In 1914 Hazen reported 20 per cent in his series. Since then Knowles has reported 16 per cent, Oppenheim of Vienna, who has made very extensive studies, 20 per cent, Lane 10 per cent and White of England 25 per cent. The latter in addition stated that there were, at that time, 25,000 new cases a year in England. In 1925 the author estimated 50,000 cases a year in this country and it is doubtful if this number has decreased. McConnell stated that 25 per cent of 2,000 laborers in oils and so forth developed skin disorders, and McCord issued figures showing 30 per cent of insect powder factory employees with dermatitis. In England, after the compensation act was passed, the figures for occupational dermatitis rose from 19 cases in 1908 to 979 cases out of a total of 1,394 industrial disease cases reported in 1927. There is evidence that there has been an increasing number of claims on account of dermatitis contracted by workers since the act was adopted. In this country one large insurance company reports over 1,300 dermatitis claims per year, many without disability, but some running the limit of compensation.

TABLE 1

OHIO

SUMMARY OF COMPENSABLE CASES OF OCCUPATIONAL SKIN DISEASE REPORTED 1928-1934, INCLUSIVE

	Total All Occupational Cases	Dermatitis	Epithelioma (skin or eyes), due to carbon, pitch, tar or tarry compounds	Chrome Ulceration	Potassium Cyanide Poisoning	Total Skin Cases
1928	1,127	894	3	6	3	906
1929	1,317	985	2	10	2	999
1930	1,259	884	1	20	—	905
1931	1,217	833	5	16	1	855
1932	1,069	621	1	79	3	704
1933	1,129	726	1	20	5	752
1934	1,415	913	—	43	—	956
Total	8,533	5,856	13	194	14	6,077

In Ohio the figures for 1934 show 1,415 compensable cases of occupational disease, and 956 cases, or 67 per cent, were disabled by some skin disturbance. Since 1913 there have been

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17,771 cases reported with a yearly average, since 1921, of 1,100 cases. In the seven years reported in table 1 approximately 6,000 cases of skin disease due to occupation are found.

In Massachusetts the following table (table 2) indicates the figures taken from the annual reports of the State Department of Labor and Industries, Division of Industrial Safety. A total of 3,215 cases of occupational disease has occurred since 1925, with 1,973 cases, or 61 per cent, occupational skin diseases.

TABLE 2

MASSACHUSETTS

SUMMARY OF COMPENSABLE CASES OF OCCUPATIONAL SKIN DISEASE REPORTED 1925-1935, INCLUSIVE

	Total All Occupational Cases	Dermatitis	Anthrax	Chrome Ulceration	Potassium Cyanide Poisoning	Total Skin Cases
1925	115	8	5	—	—	13
1926	254	71	10	16	—	97
1927	247	89	8	18	—	115
1928	292	135	7	27	5	174
1929	554	345	12	22	5	384
1930	389	223	9	5	—	237
1931	447	284	12	5	—	301
1933	352	249	8	—	—	257
1934	265	182	7	—	—	189
1935	300*	206	—	—	—	206
Total	3,215	1,792	78	93	10	1,973

*Estimated.

In New York, the State Department of Labor reports that for the year 1933 there were 692 cases of occupational disease, and 462, or 66 per cent, were skin conditions.

Very little information is available in regard to the duration of disability, the cost of compensation paid, the wages lost and the medical expenses of these cases. In 390 cases reported in New York City some years ago, the disability was reported as indicated in table 3.

TABLE 3

DURATION OF DISABILITY IN 390 CASES OF OCCUPATIONAL SKIN DISEASE REPORTED IN NEW YORK CITY

38	per	cent	lasted	2 weeks to 1 month
21	"	"	"	1 to 3 months
16	"	"	"	3 to 6 months
24	"	"	"	more than 6 months

In the New York Department of Labor report of 1933 are 461 cases of occupational skin disease, with 69 per cent reporting a loss of time from work of at least two weeks. Thirty-one per cent lost over one month and less than three months of work, and only 3 per cent reported a disability of more than one year. In 1935, 335 cases were reported, with a loss of 5,685 weeks, an average of fifteen weeks' disability.

In forty shoeworkers examined in my office for insurance companies the disability up to the time I examined them totaled four years, the average being five weeks and the longest ninety-six weeks. It is of interest to note that the average duration of the disease before examination was twenty-two weeks and the longest 144 weeks.

Enough figures have been cited to emphasize the menace existing in the industrial world from skin disturbances and their contribution to the unemployment situation—perhaps a mere drop in the bucket today, but at least worthy of our serious consideration, especially from the standpoint of prevention.

It is well to call attention to certain facts which indicate the possibilities of prolonged disability in these cases. (1) We know that one attack of dermatitis, the appearance of keloids, malignancy and so forth may cause permanent disability in the same way as a broken or amputated leg or lead poisoning. (2) We also realize that one attack may leave the skin more susceptible to irritation from other sources, that is, other chemicals, heat, friction or physical exertion. (3) We are also aware of the fact that the repetition of attacks increases to a marked degree the probability of permanent disability. (4) We know that certain existing skin diseases may be exaggerated by an occupational factor with ensuing disability and that some states consider such cases occupational. (5) I believe that a fungus infection may develop as a complication of an occupational dermatitis, in the same way that a pus infection may complicate an industrial injury, and may prolong the disability to a marked extent. (6) We also know that wrong treatment, stimulating or irritating treatment, will increase the discomfort and prolong the disability in numerous cases to a great degree.

CAUSES

What about the causes of skin disturbances due to occupation? Oppenheim of Vienna has formed a comprehensive classification of causes and results produced on the skin, but it is rather complicated. It can be said, however, that the individual causes are literally innumerable. They may be physical, chemical or infectious (table 4).

The physical causes include those of mechanical origin, from friction, pressure, traction and so forth; those of thermal origin, from heat or cold; and those of actinic origin, from sun, x-ray or radium. The chemical causes represent the largest group. These agents have been classi-

fied in various ways. Suffice it to say that the majority of cases are caused by coal tar derivatives, alkalis, acids and the agents contained in woods and plants. The infectious causes include bacteria, animal parasites and fungi.

Of special interest is the fact that eruptions on the skin, if not actually caused by, are at least often exaggerated by various cleansing agents, that is, agents used to remove substances employed in work. These include, in the first place, water and, secondly, alkalis (the stronger the quicker), such as soda and soda ash, lye, bleaching powders, strong soaps and quick cleaners of various kinds, which dissolve keratin in the horny layer and macerate the skin. In these chemical detergents tri-sodium phosphate has frequently replaced caustic as an inexpensive cleaning agent for metal parts, floors and so forth. It is in some cases intensified by the addition of caustic soda and may be used in powder form or mixed with powdered soap and abrasive material, such as finely divided lava, quartz or feldspar. The third group includes degreasing agents, such as naphtha, gasoline, acetone, turpentine, alcohol and its substitutes, which dissolve out the natural oil in the skin. Trichlorethylene, a known industrial poison, is largely replacing gasoline and kerosene as a cleansing agent and is found in numerous trade-named mixtures. The last group consists of oils or paraffin as used to remove greasy substances. No complete list of individual causes has ever been made, but a report of skin irritants was published in 1929 by a committee of the Industrial Hygiene Section, established for this purpose by the American Public Health Association.

TABLE 4

CAUSES OF OCCUPATIONAL DERMATOSES

I. Physical
  1. Mechanical
     Friction, pressure, traction, etc.
  2. Thermal
     Heat
     Cold
  3. Actinic
     Sun
     X-ray
     Radium

II. Chemical
  1. Oxidizing agents
  2. Reducing agents, etc.

III. Infectious
  1. Bacteria
  2. Fungi
  3. Animal parasites

The very dry skin, the blond skin and the skin very sensitive to light are in general more sensitive to external factors. Gardiner of England found that previous skin disturbances, intercurrent diseases and focal infections contributed to the occurrence of occupational cases. Stokes has made the observations that these same factors increase the possibility of dermatitis in individuals under treatment with arsphenamine.

SENSITIZATION

There is not only the physical difference in skins in the way of color, thickness, amount of oil and so forth, but we know that the skins of various individuals have or may develop a varied capacity for reaction to both internal and external agents. An abnormal or increased capacity for reaction is spoken of as sensitization, idiosyncrasy, hypersensitiveness or allergy. Such a sensitization to a particular substance is the explanation for numerous cases of dermatitis, asthma and hay-fever arising in ordinary life. The same condition holds true in industrial cases, but whether industry should bear the whole burden is a difficult question to decide. We know that only an infinitesimal amount of a substance may be necessary to cause severe reactions. This very minute amount of substance necessary to sensitize an individual renders it almost impossible to solve the problem of whether a hypersensitiveness is acquired or hereditary. We know that no substance is supposedly innocuous enough to be beyond suspicion, whether protein or not. Therefore, a case may require a most painstaking investigation, perhaps even then without results. Sulzberger and others have emphasized the fact that this sensitization may occur in different layers of the skin. Thus, different forms of tests are needed for differentiation, namely, scratch tests, intradermal tests and patch tests. The latter have proved to be of most value in the occupational dermatoses. We know that much care must be used in making these tests and in their interpretation. There are many pitfalls, such as the exaggeration of disease process by the test, the localized sensitivity of the hands and arms, the inclusion in the tests of some minute amount of a foreign substance, a possible latent period of seven to ten days and the effect of locality, diet, season and so forth, as reported by Sulzberger and others when tests are performed under apparently identical conditions on animals in different countries.

In this connection I have been interested in a recent report of the skin tests made in a series of 432 cases of occupational skin disease. In persons working in bakeries, 38 per cent gave positive tests to rye extract, while in the other industries only 4 or 5 per cent gave positive reactions. All of these latter individuals gave evidence of clinical sensitiveness, but in the bakery group the majority did not show any clinical manifestations. The authors conclude

that there is a large group who react positively to skin tests but who do not exhibit any clinical manifestations. The patch test is still the only indicated method for investigation of dermatitis of this type and is a valuable aid in many cases.

OCCUPATIONS

The occupations affected will vary in different localities, according to the prevailing industry of the particular region. In Massachusetts, in the last five years in which the figures are available, the occupations are ranked in order of frequency as shown in table 5.

TABLE 5

MASSACHUSETTS—OCCUPATIONS AFFECTED

Occupation	Order of Frequency Affected				
	1927	1928	1929	1933	1934
Tanneries	1	1	3	3	1
Textiles	3	2	1	1	2
Shoes	2	7	2	2	3
Rubber goods	7	4	4	4	4
Printers and publishers	—	—	8	—	5
Food	—	—	6	6	6
Electric manufacturing	—	—	7	7	7
Chemicals	8	8	10	—	8
Machinery, etc.	6	3	—	5	9
Gas and oil	—	—	—	8	10
Metal trades	5	6	—	9	11

In a large series of cases, 1,342, the more frequent occupations are indicated in table 6.

TABLE 6

OCCUPATIONS WITH GREATEST FREQUENCY OF INDUSTRIAL SKIN DISEASE

Occupation	Number of Cases of Dermatosis
Housework and allied work	702
Laborers	107
Painters	87
Metal workers	73
Mill workers	68
Oil and grease workers	67
Physicians, dentists and nurses	57
Cloth handlers and tailors	49
Bakers	48
Tannery and leather workers	44
Chemical workers and drug workers	40

MANIFESTATIONS

The manifestations on the skin produced by occupational factors are varied. White of Boston has listed forty different diseases of the skin which can possibly be caused by occupational factors. The largest group by far includes dermatitis and eczema. A partial list of the diseases caused by occupation is contained in table 7.

These diseases are not necessarily occupational; some of them are very rarely occupational. It is to be remembered that an occupational factor may cause these conditions.

DIAGNOSIS

Some skin diseases, of course, have no relationship to the work of the individual, and it is, therefore, of considerable importance that an accurate diagnosis of the skin condition be made. There are, not infrequently, coincidences between the onset of skin abnormalities and the beginning of a job or the introduction of a new process, and care must be taken to identify the

TABLE 7

THE MORE FREQUENT MANIFESTATIONS OF SKIN DISEASE DUE TO OCCUPATION

Acne	*Infections*
Burns	Actinomycosis
Calluses	Anthrax
Chilblains	Blastomycosis
Dermatitis, acute	Erysipeloid
Dermatitis, chronic	Impetigo
Eczema	Paronychia
Epithelioma	Pus infections
Folliculitis	Syphilis
Keloids	Tinea
Keratoses	Tuberculosis
Radiodermatitis	
Ulcers	

manifestations occurring in an applicant for compensation. The worker is prone to reason from the effect seen on his skin back to a causal factor in his work, but many cases have proved that not every skin disease in a worker is of occupational origin. An eruption on the hands of a shoe worker is not always due to the agents he is handling, nor is the novocaine necessarily at fault in the dentist with manifestations on his hands. Other skin diseases may localize on the hands and arms. An early examination by a physician familiar with skin conditions, especially in uncertain cases, can conceivably exclude numerous cases which would otherwise obtain an industrial rating. Not only is a careful inspection and examination of the patient a necessity but, of almost equal value, is an accurate history, not alone of the onset and progress of the disease, but of the work and substances handled. A diagnosis should include not only the name of the disease, but, where possible, the exact cause in each particular case. I am well aware of the difficulty in making a positive diagnosis in a given case. Frequently one must make a diagnosis and qualify it with the phrase "probably industrial" or "possibly industrial". The criteria for these diagnoses are contained in table 8.

As I have just said, it is not always possible to make a positive diagnosis of industrial disease. There is often a language difficulty. The case is often seen and examined long after the original onset, with changes due to time and to

treatment by self or others or with alterations in the history from lapse of time and the unconscious emphasis on suggestions of kind friends. There is often lack of knowledge on the part of the patient of the exact substances and nature of the process, and often, I am sorry to say, a disinterestedness on the part of the factory or shop executives. There is frequently the desire of the employee to obtain compensation, often without regard to facts. There are many borderline cases even without the difficulties above mentioned.

TABLE 8

CRITERIA FOR DIAGNOSIS OF OCCUPATIONAL SKIN DISEASE

Definite	Probable	Possible	Negative
History			
Exposure or injury	Relation less clear cut	Discrepancies in story	Definite evidence of other skin disease
Attacks—on exposure	Substances less often cause irritation	Substances seldom irritate	
Amelioration—on stopping work			
No outside source of irritation		Other possible irritant	Definite relation to outside irritant
Examination			
Lesions consistent with exposure	Lesions less characteristic	Lesions more indefinite	
Location—consistent	Exam. late	Other possible diagnosis	
No evidence of other skin disease	Condition nearly well		

TREATMENT

I shall not discuss the treatment of these cases in detail. I do wish to emphasize certain general principles.

Early detection is an essential of satisfactory treatment, so the case should be examined early. The correct diagnosis is necessary. The cause or causes should be detected and eliminated. Then the case can be treated as any other case of the same disease in the same stage would be treated. There is no specific local treatment of an industrial dermatosis. Such a program, if it can be carried out consistently, will definitely shorten the period of disability.

As a part of therapy, the physician should suggest not only the local treatment, but the necessary protective measures, possibly a change in the industrial process, a temporary change of work or even a temporary stopping of work, before advising the employee to give up his job permanently.

It may not be amiss to stress the desirability of not exaggerating the cutaneous process by treatment. Some years ago I found that 20 per cent of a series of cases of dermatitis were caused by therapeutic agents and numerous industrial cases are seen which are undoubtedly worse from treatment. Among industrial cases, butesin picrate, iodine, ammoniated mercury, sylphonaphthol and so forth are the most frequent offenders. Such exacerbations may prolong the disability materially so that a warning should be issued to patients to omit agents which aggravate conditions of the skin.

PREVENTION

Our preventive measures should be directed into three channels: first, toward the prevention of disease, by education, by cleanliness, by systematic inspection to enforce the standards adopted and by selection of proper employees; secondly, toward the prevention of prolonged disability by early detection, the determination of the cause and its removal and proper treatment; and thirdly, toward the prevention of false claims, that is, the compensation of employees with nonindustrial diseases. This requires an accurate diagnosis of the disease and also the detection of malingerers, those who are seeking deliberately to obtain compensation not due them. This latter is a difficult task and may require the aid of a psychiatrist.

As a part of the program of carrying out these measures, there should be, in the first place, in every organization some one individual or committee familiar with the effects on the skin of agents used in that particular industry. This person or group will vary with the size and character of the industry, possibly an old employee, a foreman, an executive, a safety engineer, a nurse, a physician or a group who can advise regarding the handling of the agents in question. Secondly, there should be a system which will insure, as far as possible, the early detection of cases and, thus, the prevention of long disability. The need of an employee reporting to the dispensary, or at least to a re-

sponsible foreman, at the onset of any new development on the skin should be emphasized.

The instruction of employees in the proper use of materials should take place and the employment of adequate safeguards in the handling of potentially irritating agents should be carried out and enforced. Adequate dispensary facilities with a keen, well-trained graduate nurse in attendance and with a physician of the proper type, on call at least if not on regular hours of duty, are invaluable in recognizing these cases early. A healthy suspicion regarding industrial factors should be created in the minds of these individuals, and, if the diagnosis is uncertain, a reliable consultant should be available for settling the question while the picture on the skin is unchanged and while the facts in the particular case are easily accessible and not distorted by time and discussion. Any procedure which enables these cases to be seen by the consulting dermatologist, either of the organization concerned or of the insurance company, will pay dividends, as a rule, in preventing many of the protracted cases that are now seen and in obviating many of the uncertainties of exact origin which arise as time drags on.

The various methods of prevention are many and vary with each special industry. They may be mechanical or chemical. Take, for example, the machine processes in which a cutting oil is used. This work has been very carefully studied and, if the following suggestions are adopted, the major part of disturbances from cutting oils will be eliminated:

(1) Use oils which are nonirritating and free from bacteria, if possible.

(2) Make systematic bacteriologic check-ups to determine the condition of the oils.

(3) Filter and sterilize oils that are used repeatedly.

(4) Give careful attention to the selection of men and avoid placing persons susceptible to infection in departments where oil is handled.

(5) Remove all infected men from oil and from fellow workers.

(6) Pay special attention to the manner in which the men wash.

(7) See that all minor injuries, irritations and infections of every type are reported at once to the plant hospital or to the plant physician for treatment.

Some of the more common general preventive measures are given in table 9.

Protective hand creams of various compositions are employed with varying success. They are often of great value if the employee cooperates in their proper use.

In the accomplishment of an adequate attack on this menace of occupational skin disease, it is necessary not only to develop diagnosis and prevention along the lines already suggested, but it is imperative that a more systematic, comprehensive and coordinated program be planned in order to achieve more definite results. The establishment of some centralized agency with the purpose of accumulating data about such diseases and aiding in the development of preventive measures would help. Such an organization would do much toward the crystallizing of sentiment on the part of industrial executives,

TABLE 9

GENERAL PREVENTIVE MEASURES AGAINST OCCUPATIONAL SKIN DISEASES

1. Abundant facilities for washing purposes.
2. Inspection by experienced observers of hands and arms of workers in known irritating agents to enforce—
   a. Cleanliness.
   b. Proper use of preventive measures.
   c. Early treatment.
3. Emphasis on use of rubber gloves, pants, aprons, and so forth or on proper method of mechanical handling of irritant substances.
4. Complete removal from skin, by harmless methods, of irritants several times per shift.
5. Prevention of maceration of skin by liquids, sweat, and so forth.
6. Prevention of dust and irritation therefrom.
7. Use of oily substances before and after work, especially on workers in degreasing agents.
8. Care to prevent the use of agents for protection in which a poisonous substance can be dissolved or through which it penetrates.
9. Prevention of workers with pus infection from entering work or from using towels, and so forth of other workers, especially those working with poisonous substances.
10. Extreme care in use of agents to remove substances from skin.
11. Selection of resistant employees in occupations where substances are apt to irritate.
12. Detailed study of occupation with object of devising preventive measures.
13. Inspection of new employees and those returning from sickness and accidents.
14. Instructions to foremen concerning early reporting for early treatment.

labor, the medical profession and the laity toward occupational disease, in general, as preventable conditions.

It is possible that sectional centers, similar to corps areas in the army, for registration and investigation of possible industrial cases would suffice.

It is possible that the expansion of state programs, following the plans already in use in New York, Ohio, Massachusetts, New Jersey and other states, would work effectively.

It is possible that the U. S. Public Health Service with its awakened interest in occupational diseases may serve as a coordinating agency in the progress toward the elimination, or at least reduction, of such cases. This or-

ganization has the advantage of a widespread, well-organized medical personnel, with the public health aspects at heart, and could well be, in my opinion, an important factor in any method of attack on the problem. Whether further government participation in business activities is desirable is to be considered.

It is possible that a separate organization with representatives of business executives, dermatologists, industrial physicians, the U. S. Public Health Service and insurance agencies could accomplish much. I doubt if the measure of success achieved by the American Tuberculosis Association in its attack on tuberculosis can be attained, but I should expect a very definite improvement over the present situation. The disadvantages of a new organization are evident. A combination of these methods may be necessary.

As one of the medical contributions to the solution of the problem of occupational skin disease, it will be necessary to provide adequate training in this field in medical schools and in institutions with large skin clinics. Not only should there be courses provided for public health workers, but industrial physicians should have a proper opportunity of reviewing the knowledge of skin affections occurring in industry. A wider dissemination of the facts about these conditions is urgently needed.

Furthermore, investigative work on the subject should be stimulated. Scholarships or fellowships could well be provided by industry, either a single large corporation or a group of similar trades, for the study of particular problems in this field. Such a fellowship would require a survey of the literature on that particular phase, the obtaining of cases and case histories, the visitation to plants with interviews with workmen, foremen, chemists and so forth, a detailed analysis of data obtained and possibly chemical or other laboratory studies in order to render an adequate service. Such studies would undoubtedly emphasize the need for further studies of fundamental physiologic activities of the skin about which so much is lacking at the present time.

CONCLUSION

In closing, let me emphasize the need for cooperative efforts all along the line to make real progress toward a definite reduction in these cases in number and length of disability—cooperation in obtaining these cases earlier, cooperation in the employment of demonstrated preventive measures, cooperation in providing for adequate medical training in this field in order to assure accurate diagnoses and cooperation in the detailed studies of cases and industrial processes and in the fundamental physiology or chemistry of the skin. Such a cooperative effort would have the purpose of lessening the burden of this menace for both the employer and the worker. I believe with Dr. Hayhurst, consultant in occupational diseases in Ohio, that attention to predisease conditions and to every possible industrial hazard would suffice to prevent occupational diseases or at least a large portion of the disability produced by them.

THE EFFECT OF PROTAMINE INSULINATE ON THE BLOOD SUGAR LEVEL INCLUDING INTRAVENOUS USE IN RABBITS*

BY HARRY BLOTNER, M.D.†

HAGEDORN, Jensen, Krarup and Wodstrup[1] have prepared a protamine insulinate, a new insulin, which is said to be absorbed slowly and which appears to have an effect on the blood sugar level over a much longer period of time than does ordinary insulin. Their results with protamine insulinate appear striking and warrant further investigation. The protamine insulinate used in this study was supplied by Eli Lilly and Company. It has been prepared for use in the way recommended by them.

EFFECT OF SINGLE DOSES ON BLOOD SUGAR LEVEL

It has been shown that the action of protamine insulinate is milder and more prolonged than that of ordinary insulin. However, it has been difficult to determine accurately the duration of the effect of protamine insulinate as compared with that of regular insulin. Nevertheless, the blood sugar lowering effect of the former is said to last approximately twice as long as that of the latter.

A comparison has been made of the relative effect of various doses of the new and old insulin on the blood sugar level in rabbits and in normal and diabetic individuals. The blood sugar was determined according to Folin's micro method.[2] Rabbits weighing about five pounds were injected subcutaneously on one day with a given dose of protamine insulinate and on another day with the same number of units of regular insulin. The blood sugar curves were obtained by hourly blood sugar determinations for from seven to ten hours. Similar tests were made in normal and diabetic people who were

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injected after an overnight fast. No food was taken during the test periods.

After the injection of 5 units of regular insulin into two rabbits the blood sugar concentration dropped rapidly from 104 mg. to 50 mg. in two and three hours and the animals developed convulsions. In comparison, with 5 units of protamine insulinate the blood sugar concentration decreased gradually over a period of four hours to only 75 mg. and then it returned to near the original level in about seven hours. In order to get a considerable effect on the blood sugar level within a period of seven to ten hours it was necessary to use comparatively large amounts of new insulin. Consequently, in subsequent experiments with rabbits larger doses were employed.

After the injection of 20 units of regular insulin into seven rabbits, there was a sharp and rapid drop in the blood sugar level and all the animals developed convulsions in about three hours. In contrast, after the administration of 20 units of protamine insulinate there was a gradual and slow decrease in the blood sugar concentration during the test period. Certain rabbits developed convulsions in nine hours after the injection, although this was not a general rule. Illustrations of the results obtained with various doses are given in chart 1.

gradually and a hypoglycemic level was reached in seven hours. In a third person the new insulin caused no decrease in the blood sugar. In contrast, the drop in the blood sugar level after the injection of regular insulin was more rapid as shown in chart 2.

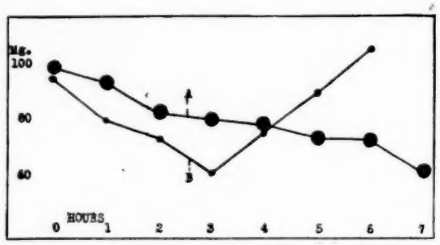

CHART 2. Blood sugar curves following the injection of (A) 10 units of protamine insulinate and of (B) 10 units of regular insulin into a normal woman.

In two diabetic patients the injection of 10 and 20 units of protamine insulinate caused a gradual decrease in the blood sugar level in contrast to the relatively sudden and greater drop produced by regular insulin. An illustration of the results obtained is given in chart 3. The comparative effects of the two drugs appear more striking in diabetics than in normal persons, probably due to the more labile blood sugar seen in the former.

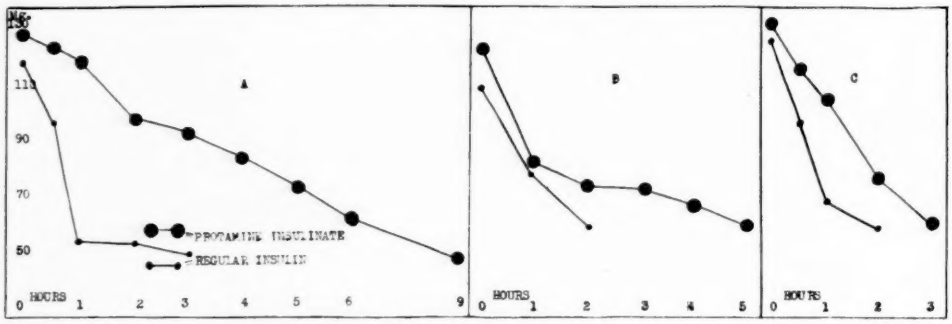

CHART 1. Comparison of blood sugar curves obtained after the injection of (A) 20 units, of (B) 40 units and of (C) 80 units of protamine insulinate and regular insulin into a rabbit. Convulsions occurred at the end of each experiment.

When larger doses of protamine insulinate were injected into rabbits, the effect on the blood sugar concentration was more rapid although still slower and more prolonged than with regular insulin. After the injection of 40 units of protamine insulinate, three rabbits had hypoglycemic convulsions in five hours compared with two hours after the injection of the same amount of regular insulin. The administration of 80 units of the new insulin produced convulsions in two rabbits in three hours compared with two hours after the injection of the same quantity of the old insulin.

Protamine insulinate also has a slow and prolonged effect on the blood sugar of certain normal people. After the injection of 10 units of the new insulin in two individuals the blood sugar concentration decreased very slowly and

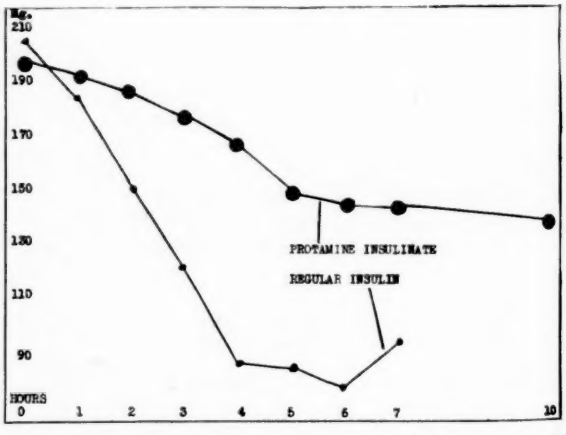

CHART 3. Blood sugar curves of a mild diabetic patient showing the relative effects of the injection of 20 units of regular and new insulin.

CAUSE OF DELAYED ACTION

The cause for the delayed action of the new insulin is believed to be due to the retarded rate of absorption of the protamine insulinate into the blood stream as the result of the compound being injected into the subcutaneous tissues as a suspension. However, if this were true, intravenous injection of this drug should cause a more rapid drop in the blood sugar than its subcutaneous injection and as sharp a drop as the injection of regular insulin. Nevertheless, in eleven rabbits this was not always the case. Both intravenous and subcutaneous injections of the new insulin in doses of 80 units hours. However, when the supernatant fluid and the precipitate of this mixture were injected separately into rabbits there was even a more rapid drop in the blood sugar level than that obtained following the injection of the mixture. The animals convulsed in approximately two hours just as though regular insulin were injected. Apparently the serum dissolved some of the protamine insulin to give a rapid action. On the other hand the injection of the precipitate that was not dissolved in the serum gave as rapid a drop as that produced by regular insulin as shown in chart 5.

Apparently the slow and prolonged action of

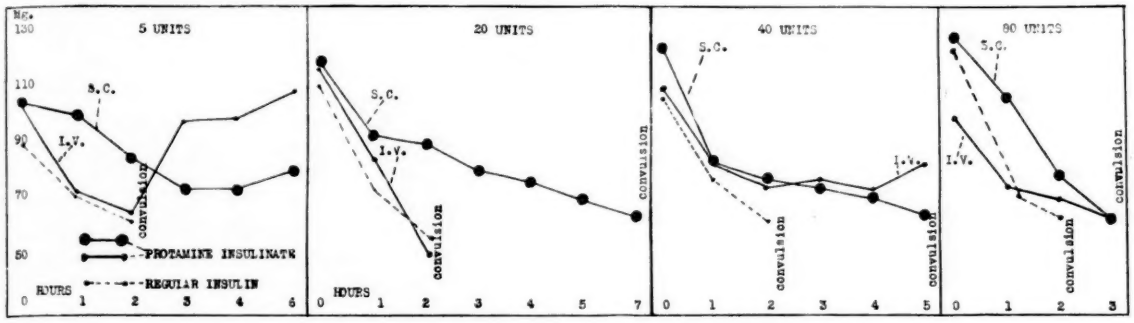

CHART 4. Blood sugar curves in rabbits showing varying effects of intravenous (I.V.) and subcutaneous (S.C.) injections of certain doses of protamine insulinate compared with the subcutaneous injection of regular insulin.

in one rabbit and 40 units in two rabbits caused practically the same type of drop in the blood sugar level and this was not very different in form from the curve produced by regular insulin. However, the intravenous injection of 40 and 20 units of protamine insulinate into three rabbits caused a more rapid drop in the blood sugar concentration than its subcutaneous injection and about as rapid a drop as that which occurs following the subcutaneous injection of the same amounts of regular insulin. The intravenous injection of 5 units of protamine insulinate into two rabbits caused a more rapid and obvious decrease in the blood sugar level than its subcutaneous injection. The drop for the first two or three hours was almost the same as that noted after the injection of 5 units of regular insulin and then the blood sugar level rose whereas the rabbits developed convulsions with the regular insulin. Illustrations are given in chart 4.

Other experiments were made on this subject by adding serum to protamine insulinate. Since there was a precipitate following admixture of the two, the effects of the subcutaneous injection of the mixture, of the precipitate and of the fluid portion were tested separately.

After injection into rabbits of 20 units of new insulin mixed with .5 cc. of serum, the blood sugar level dropped more rapidly than following the injection of the protamine insulinate alone and the rabbits convulsed in three to four

the new drug is dependent, in some cases at least, on something in addition to the process of absorption and is perhaps due in part to a chemical reaction in which the protamine insulinate is broken down in the body over a relatively long period of time. On the other hand, Beecher and Krogh[3] made interesting micro-

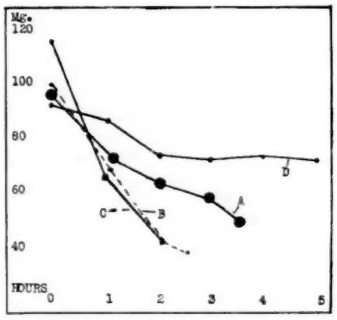

CHART 5. Relative blood sugar curves in rabbits following the subcutaneous injection of (A) 20 units of protamine insulinate mixed with .5 cc. of serum, of (B) the fluid portion and of (C) the precipitate of an equal mixture and of (D) 20 units of protamine insulinate. The rabbits convulsed at end of tests A, B, and C.

scopic observations on the absorption of regular and new insulin and found that ordinary insulin precipitated alone or with methylene blue at its isoelectric point practically disappeared within forty-five minutes after injection while protamine insulinate disappeared in five hours. However, I wonder if the comparison of the absorption of the ordinary and new insulin by this method is accurate because the absorption

of regular insulin was observed as a precipitate and not as a solution.

STABILITY OF PROTAMINE INSULINATE

It appeared of value to determine certain factors in relation to the stability of the new insulin. First, the effect of heat on the precipitate of protamine insulinate and on its blood sugar action was tested. This appeared important because of the possibility that a warm syringe used in measuring this drug might destroy it. Accordingly, several lots of the new insulin were exposed to varying temperatures in a water bath.

When protamine insulinate was heated for fifteen minutes at 38° C., the precipitate appeared to become finer, heavier and less flocculent. At 57° C. the precipitate practically disappeared and remained so at temperatures of 75° C. and 98° C. However, on cooling below 57° C. a faint cloud reappeared.

After injection into rabbits of 40 units of protamine insulinate heated at 38° C., the resultant drop in the blood sugar curves was much the same as that observed following the administration of the same dose when not heated. After the injection of this amount of the drug exposed to temperatures of 57, 75 and 98° C. for five to ten minutes, there was practically the same decrease in the blood sugar level during the first three hours as is seen after the administration of unheated protamine insulinate. However, subsequently the blood sugar concentration, instead of continuing to drop, began to rise. The results suggested that a sufficient amount of heat prevented the action

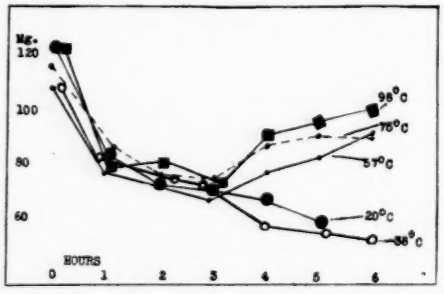

CHART 6. Blood sugar curves in a rabbit following injections of 40 units of protamine insulinate exposed to certain temperatures.

of the new insulin after three hours, possibly in part due to the almost complete disappearance of the precipitate.

Tests were made to determine how long a batch of the new insulin retains its activity after admixture. Blood sugar curves in rabbits were observed following the injection of 20 units of freshly prepared protamine insulinate and after it stood for ten and twenty days. The results are shown in chart 7. After ten days the new insulin had less action on the blood sugar concentration than when it was freshly prepared. At the end of twenty days its effect on the blood sugar level was almost negligible. It appears from these observations that protamine insulinate begins to deteriorate within a period of ten days after being mixed.

EFFECT OF GASTRIC JUICE ON THE NEW INSULIN

In a previous work I[4] was able to demonstrate that certain gastrointestinal enzymes digested regular insulin. It seemed of importance to ascertain whether this was also true of protamine insulinate. To determine this, 40 units of the new insulin was mixed with 10 cc. of gas-

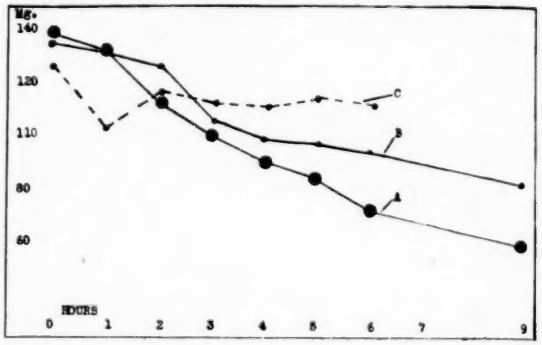

CHART 7. Blood sugar curves in a rabbit showing the effect of the injection of 20 units of protamine insulinate: A, freshly mixed; B, after standing 10 days; C, after being prepared for 20 days.

tric juice and incubated for one hour at 37° C. This was injected into a rabbit and the resultant blood sugar curve observed over a period of ten hours. There was no drop in the blood sugar level during the test period such as occurs when this drug alone is injected. The results suggested that the gastric juice destroyed completely the protamine insulinate, just as it destroys ordinary insulin.

SUMMARY

This paper presents a study of the effect of protamine insulinate on the blood sugar level under certain conditions.

The action of a given dose of protamine insulinate is less marked and more prolonged than that of an equal amount of ordinary insulin. The larger doses of protamine insulinate cause a more rapid drop in the blood sugar level than small doses although the effect is still prolonged. It is difficult to give any definite figure as to the comparison of the duration of the effect of the new and old insulin.

The cause for the delayed action appears to be due to the retarded rate of absorption of the new drug and also perhaps to a chemical reaction in which the protamine insulinate is broken down in the body over a relatively long period of time.

Protamine insulinate appears unstable under certain conditions. Heat at certain temperatures causes the precipitate to disappear practically and decrease its prolonged effect. Protamine insulinate is destroyed by gastric juice and consequently is ineffective when administered by mouth. After admixture the new insulin appears to lose some of its effect in ten days.

REFERENCES

1. Hagedorn, H. C.; Jensen, B. N.; Krarup, N. B., and Wodstrup, I.: Protamine insulinate. J. A. M. A. **106**:177 (Jan. 18) 1936.
2. Folin, O., and Malmros, H.: An improved form of Folin's micro method for blood sugar determinations. J. Biol. Chem. **83**:115 (July) 1929.
3. Beecher, H. K., and Krogh, A.: Microscopic observation of the absorption of insulin and protamine insulinate. Nature **137**:458, 1936.
4. Blotner, H.: The effect of gastric juice, bile, trypsin and pancreatin on insulin: the prevention of the digestion of insulin with alcohol. Am. J. M. Sc. **192**:263 (Aug.) 1936.

LIVING WITH A COLOSTOMY

BY EOLINE CHURCH DUBOIS, M.D.*

IN view of the fact that colostomies are being done today for a variety of conditions in the large bowel, conditions which are apparently on the increase, it is evident that the management and care of the artificial anus are matters which should be well understood. But, as a matter of fact, the average physician in general practice has had little experience with this type of case, and we have frequently seen patients after their discharge from some of the finest clinics in the country who have found their condition insupportable because they had not been taught how to care for themselves. Theoretically every surgeon recognizes his duty toward his patients in this respect and it is his intention that colostomy cases shall receive adequate instruction before leaving the hospital. But, the one fundamental fact that is rarely taken into consideration is that the routine and ready care incident to hospital existence are in direct contrast to the problems of life as the ordinary individual finds it on the outside where he quickly becomes enmeshed in the tangled web of his responsibilities. There is every reason for enthusiasm regarding the brilliant results of surgery of the large intestine for the removal of malignant growths, but it is evident from the many addresses on this subject to which we have listened that the surgeon is concerned only slightly with the aftercare of the new and strange opening in the abdominal wall. Indeed, this seems a small matter in view of the larger benefits gained, and yet it is impossible to ignore the fact, even if it is unnecessary to magnify it, that an abiding handicap has been substituted.

What then are the fundamentals of instruction that the patient requires to accustom himself to the new order of things? These include matters of diet, methods of elimination, protecting devices and so forth.

It is obvious, in the first place, that the small eater who is apt to be of the constipated type will find less difficulty in preventing the involuntary discharge of fecal matter than the hearty eater whose bowel functions have always been regular. Abstemiousness, while not an absolute necessity, is of great advantage in simplifying the management of this condition. It will be found that, although a special diet is not necessary, the foods taken best are those easiest to digest with little waste, as bread, cereals, eggs, potatoes, milk, small amounts of vegetables, butter, cream, bacon, fruit juices in moderation, jellies, tender cooked meats, coffee and tea. There will always be certain foods fatal to the peace of mind of one who has a colostomy, onions, melons, fish and maple syrup serving as examples. After one has experimented for a while he will learn what dishes to avoid or at least how much he can take with safety. There is, however, another thing which must be taken into account and that is that routine must be followed so far as is possible regarding time as well as amount and kind of food. If a light lunch is habitually taken at noon, the substitution of a heavy meal will serve to stimulate bowel activity to an unusual degree and at a most inconvenient time. Changes in the weather, sudden extremes of heat or cold, unusual fatigue and mental distress may bring on attacks of diarrhea just as may happen to anyone with a relatively unstable constitution. As is true with all bodily conditions, the phlegmatic, deliberate, calm persons make any adjustment easier than those who find themselves beset by fears and doubts.

The apparatus necessary to receive the discharges from the artificial anus are next to be considered. The happiest situation is, of course, to accustom the bowel to one movement each day in the morning immediately after breakfast and not to have to wear anything except a fold of gauze to protect the stoma. There are a few who are able to do this, but nearly everyone, who has a colostomy, must wear day and night some sort of a protective container against unexpected activity of the colon. It is extraordinary what cumbersome equipment has been devised for this condition, most of the colostomy bags being heavy and expensive, though there are some which are very good. The patient will have to try out one or two before he makes his final choice. The simplest and best arrangement

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to my mind at the present time is a belt made of unbleached cotton with a round hole in it about four inches in diameter and a container of the same material, shaped like a doll's tam, which goes through the hole in the belt. Oiled silk which is removable lines the tam and about twelve sheets of ordinary toilet paper are placed next so that anything which goes into the container is easily disposed of by removing the paper. It is hard to imagine a simpler, more hygienic or more easily cared for device, and, furthermore, anyone can make it at the cost of only a few cents.

The prevention of colonic seeping or involuntary movements is managed by irrigations and by drugs. This is the most difficult part of caring for a colostomy. There are many patients who will just not be bothered with irrigations and are consequently made miserable and helpless victims of a condition that need not be intolerable if cared for correctly. Here again it is astonishing how complex and expensive is the equipment sold for this purpose. A patient despairingly told me that she could not take an irrigation in less than two hours, counting the time it took her to tidy the bathroom, put away her irrigating outfit and so forth. It goes without saying that most patients cannot afford expensive apparatus and, furthermore, when one goes away one does not wish to have to take an extra trunk or refuse invitations to visit in private homes. I have worked out a simple and easy method which anyone can follow anywhere there is a toilet and running water. An enamel basin, fourteen inches in diameter, a two quart douche bag and a rectal tube (26 Fr.) or a larger and longer colon tube, if preferred, are all the equipment necessary. No pail, no two-way catheter and no rubber pad are required. I give my patients these directions. Sit astride the toilet seat with both covers up facing the tank; hold the basin upright between the thighs to act as a splasher; insert the catheter already attached to the douche bag which is filled with warm water only and the water will flow into the colon and out carrying fecal matter to the basin which directs it to the toilet bowl. The douche bag is placed on the adjacent washstand, on the tank or, if more convenient, on one's shoulder. I mention this because, if one happens to be away from home, the convenient hook for hanging the bag may not be available. Four quarts of water are sufficient for a satisfactory irrigation and this usually occupies thirty minutes. During the next fifteen minutes while bathing and dressing, there will be a final gush of retained water and fecal matter after which the colon will probably be quiet for the next twenty-four hours. There is hardly any more time expended than taking an ordinary bath. Basin, bag and tube can be carried anywhere, and the process can be carried out wherever there are toilet facilities and wherever one can have undisputed possession of the bathroom for three quarters of an hour. It is not necessary that this be done every day for in some cases every other day is sufficient. If one can train himself to have a morning defecation with little or no seepage during the remaining twenty-four hours, he is indeed fortunate. This can happen when the colostomy is pretty well down on the left side because the contents of the bowel at that point are considerably less fluid than higher up or to the right of the umbilicus.

As to drugs which are found useful, there are two which perform yeoman service in time of need, bismuth and paregoric, the former to thicken the intestinal contents and absorb the gas and the latter to quiet undue peristalsis. One may use bismuth, kaolin or charcoal in the absorption of offensive flatus, but, aside from the objection of expense, bismuth is the most satisfactory. Its dose varies from a teaspoonful daily to two or three times a week. The diet, of course, makes considerable difference in the fluidity of the intestinal contents as it does in the amount of decomposition products. Trouble ensues for the heavy meat eater and the one who eats too much in general, whereas abstemiousness pays large dividends in personal comfort. As to paregoric, this is only for emergencies when diarrhea occurs from eating too heartily of perhaps melons, waffles and maple syrup or other foods that easily excite peristalsis. Two teaspoonfuls of paregoric and one of bismuth subnitrate will quickly calm the colonic activity and, in combination with a low residue diet (boiled milk, egg, toast, crisp bacon, tomato juice, blanc mange or jello with cream) for twenty-hours, will permit re-establishment of the ordinary routine the following day.

It is necessary to understand clearly that each colostomy patient is an individual and that there is no one set of rules which will fit everybody or meet the exigencies of the case when he has left the hospital. The patient's own doctor, therefore, should take upon himself the work of rehabilitation and should make readjustments of diet, hours of rest, work and so forth so that the new order of things will not work unnecessary and unendurable hardships.

It is evident that the breaking of the colonic circuit is an operation for which there is a steadily increasing need and there is no doubt that it could give aid and comfort to many who now refuse it because the family physician fails to present the case in a light the patient can accept.

REPORT OF A CASE OF GAS BACILLUS INFECTION OCCURRING IN A WOUND FOLLOWING AN OPERATION FOR CHRONIC APPENDICITIS*

BY BYRON E. HOWE, M.D.†

FOLLOWING is a report of a case of gas bacillus infection originating in the abdominal wound of a patient operated for chronic appendicitis and treated with gas bacillus antitoxin with subsequent recovery. It is reported because of the comparative infrequency of infection of this sort and because of the extensive involvement of subcutaneous tissue and the peritoneal cavity. Comment is also made upon the gratifying effect of frequent doses of antitoxin.

The patient was a farmer by occupation, 43 years of age, with a history of recurrent attacks of appendicitis occurring over a period of 2½ years. The patient's mother has diabetes, otherwise the family history was negative. He had pneumonia at the age of 20 and 2 years ago his teeth and tonsils were removed.

He was admitted to the hospital February 20, 1936, for the usual preoperative preparation of the skin, which included shave, washing with mercury bichloride and alcohol, application of tincture of metaphen and dry, sterile dressing. On February 21, before operating, the skin was again painted with tincture of metaphen and the appendix was removed through a right transrectus incision.

Following the operation, on February 22, 23 and 24, the patient had an excessive amount of abdominal pain and distention, with considerable vomiting. On the morning of February 25 the patient appeared toxic and very weak. The abdomen was moderately distended and soft. Externally the wound appeared clean, but extensive subcutaneous emphysema was present over the right side of the abdomen. This rapidly spread upward across the chest to the right side of the neck, downward across the groin into the right thigh and across the midline in the suprapubic region.

Treatment consisted of opening the abdominal wound widely by removal of the stitches and inserting a rubber tissue drain down to the peritoneum and the intravenous injection of glucose and gas bacillus antitoxin (perfringens antitoxin, 10,000 units, and vibrion septique antitoxin, 10,000 units, in syringes). The following doses of antitoxin were given:

Feb. 25, 1936—11 a. m. One syringe—20,000 units.
Also, at this time, 2,000 units of gas gangrene antitoxin and 1,500 units of tetanus antitoxin were injected subcutaneously in the crepitating area above the right groin.

Feb. 26, 1936— 6:45 a. m. One syringe—20,000 units.
Feb. 27, 1936—Peritonitis symptoms developed at this time.
8:00 a. m. One syringe—20,000 units.
7:00 p. m. " " " " "
Feb. 28, 1936— 7:10 a. m. " " " " "
8:00 p. m. " " " " "
Feb. 29, 1936—10:30 a. m. " " " " "
Mar. 1, 1936—12:45 a. m. " " " " "
9:00 p. m. " " " " "

All of the injections of serum were given intravenously, coincident with the use of glucose. The extension of the infection into the peritoneal cavity occurred after two doses of the serum had been given and it was associated with marked distention, vomiting, hiccoughs and a profuse thin watery discharge from the wound. This discharge was exceedingly copious for over 72 hours, after which it gradually subsided. A heavy trace of albumin appeared in the urine. On February 25 the total white blood cell count was 5,200 with 64 per cent polymorphonuclears. The peritonitis was treated with frequent doses of powdered opium, withdrawal of all fluids by mouth, glucose by venoclysis and later by enemas and pitressin. It was felt both by the attendants and the patient that the administration of the serum was followed by temporary relief from the toxic symptoms.

Although several cultures were taken from the wound and from the fluid which drained from the abdomen, the Welch bacillus was not isolated. A typical laboratory report follows:

"Swab received:
Smear—few leucocytes, rare Gram-positive cocci and short thick Gram-positive bacilli.
Culture—*B. welchii* not isolated.
Note—*B. welchii* probably not on surface but in deeper tissues."

Incision over the areas of crepitation was not made because of its apparent futility. Crepitus was still present in the axilla and right groin for 10 days after the onset. On March 7, with local anesthesia (novocaine), the wound edges were freshened with a scalpel and sutured together.

The patient was discharged from the hospital on March 15, the wound having healed without hernia. This has been confirmed at subsequent examinations.

It was believed that the organism was probably encountered in the skin at the time the incision was made and it was felt that the short incision that made it easier to prevent evisceration through the wound, which showed no appearance of healing, together with the massive, frequent doses of serum, were responsible for this patient's recovery.

*From the Surgical Service of the W. B. Plunkett Memorial Hospital, Adams, Massachusetts.

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The Massachusetts Medical Society

PROCEEDINGS OF THE COUNCIL

Stated Meeting, October 7, 1936

A STATED meeting of the Council was held in John Ware Hall, Boston Medical Library, 8 Fenway, Boston, on Wednesday, October 7, 1936, at 11:00 a. m. The President, Dr. Charles E. Mongan, Middlesex South, was in the chair and 149 Councilors were present. (See Appendix No. 1.)

The President called the meeting to order and asked the Secretary to read an abstract of the minutes of the last meeting. The Secretary announced that the record was published in full in *The New England Journal of Medicine* for July 30, 1936 and, after the principal actions of the Council were read, the President declared that the records as published were approved.

The obituary of Dr. Michael Francis Fallon of Worcester was read by the President who asked the Councilors present to stand in memory of a former colleague.

DR. MICHAEL FRANCIS FALLON of Worcester, Massachusetts, died at his home, June 24, 1936.

Dr. Fallon was born in Worcester in 1863. He graduated from Holy Cross College in 1883 and from the Harvard Medical School in 1887, subsequently studying abroad for two years before entering practice in Worcester. With the founding of St. Vincent Hospital, Dr. Fallon was appointed to its staff, and in 1908 was advanced to the position of chief surgeon.

He was a member of the Council of the Massachusetts Medical Society for many years, a former Vice-President and a former President of the Worcester District Medical Society. Ex-Governor Walsh appointed Dr. Fallon to membership on the State Board of Registration in Medicine in 1915 where he served the State for the succeeding seven years. His other medical interests consisted of Fellowship in the American Medical Association, and in the American College of Surgeons, and membership in the New England Surgical Society.

Dr. Fallon is survived by his widow and a son, Dr. John M. Fallon, who was associated with his father in the practice of surgery.

REPORTS OF STANDING COMMITTEES

Arrangements

Dr. Horatio Rogers, Suffolk, Chairman of the Committee of Arrangements, presented his report (see Appendix No. 2) and it was voted to hold the next Annual Meeting in Boston on June 1, 2 and 3, 1937.

Membership and Finance

The report of this Committee was presented by the Chairman, Dr. Blakely of Norfolk. The report on membership recommended that four Fellows be allowed to retire, that the dues of three Fellows be remitted, that eight Fellows be allowed to resign and that seven Fellows be deprived of the privileges of Fellowship. (See Appendix No. 3.) The report was accepted and the recommendations adopted.

The report on finance recommended that the dues for the ensuing year should remain as at present, namely, $10.00 for resident and $6.00 for nonresident Fellows. The report was accepted and the recommendation adopted.

State and National Legislation

While the Committee had no formal report to make, the President read a letter which he expects to have printed in *The New England Journal of Medicine* in the near future in which the attention of the Fellows is called to the need of referring contemplated legislation to the Committee before its introduction into the Legislature. (See Appendix No. 4.) The President explained that in previous years the Committee had been handicapped in its work by learning at the last minute of a bill which had been introduced under the auspices of some Fellow without previous consultation with the Committee.

Medical Education and Medical Diplomas

The Chairman, Dr. Reginald Fitz of Suffolk, informed the Council that, following the receipt of a communication from Middlesex College, the Committee had held a special meeting at which it was voted to present the following recommendation to the Council:

> "That the Massachusetts Medical Society inform the Trustees of Middlesex College that the Society is deeply interested in the improvement of all conditions which have to do with the giving of medical education in Massachusetts; that the Society is anxious to do all that it can to help Middlesex College develop in an approved manner. The Society suggests that the Trustees of Middlesex College lay before the President of the Society suggestions as to how the Massachusetts Medical Society might be of help to Middlesex College."

In addition to the foregoing formal recommendation the Committee offered the suggestion that the President be empowered to appoint a

committee of Fellows of the Massachusetts Medical Society which would have power to act on behalf of the Society in an advisory capacity to any medical school or college in helping to direct such institution's efforts to develop and improve its facilities for teaching. The report of the Committee was accepted by vote. The Council next adopted the formal recommendation of the Committee and voted approval of the suggestion that the President appoint an advisory committee recommended by the Committee on Medical Education and Medical Diplomas.

Permanent Home

The Secretary read the report of the Committee on Permanent Home submitted by Dr. Greenough who was unable to be present in person. (See Appendix No. 5.) It was voted to accept the report and adopt the recommendation.

The following Standing Committees had no report to make: (1) Committee on Publications, (2) Committee on Ethics and Discipline, (3) Committee on Malpractice Defense and (4) Committee on Public Health.

SPECIAL COMMITTEES

Cancer

The Committee on Cancer submitted a written report signed by the Chairman, Dr. Greenough of Suffolk. The report was read and accepted. (See Appendix No. 6.)

Postgraduate Instruction

The report of the Committee on Postgraduate Instruction was presented by the Secretary, Dr. Parkins of Suffolk, in the absence of Dr. Ober. (See Appendix No. 7.) This report was accepted and placed on file.

Public Relations

The report of the Committee on Public Relations was presented in sections by the Chairmen of Subcommittees.

Dr. J. Harper Blaisdell, Middlesex East, reported for the Subcommittee on Hospital Relations. He recalled the action of the Council at its Annual Meeting in June, in which the Prepayment Hospital Plan was approved in principle and referred back to the Public Relations Committee for further conferences, and stated that pursuant to that vote two meetings had been held with the hospital group and with representatives of the pathologists, the roentgenologists and the anesthetists. The pathologists and the anesthetists chose to accept the conditions of the Hospital Plan and to receive their compensation through the corporation which is to be formed. The roentgenologists on the other hand preferred to submit their bills as private practitioners. There was no objection on the part of the hospital group to this decision since, as a result, the cost to subscribers will be materially reduced. He reported that the Enabling Act, which will permit the formation of a nonprofit corporation, was passed by the Legislature and that six men have applied for incorporation papers. The proposed contract between the hospital corporation and subscribers is at present in the hands of the Insurance Commissioner. He outlined briefly the action which will follow the approval of the Commissioner and stated that the Massachusetts Medical Society and the District Societies in which participating hospitals are located will be represented on an Advisory Council. The President explained the reason for special legislation in this case and in reply to a question from Dr. Parkins stated that the policy will be open to groups and not to individuals. The report was accepted.

Dr. Frothingham, Suffolk, presented the report of the Subcommittee on Public Health and Practitioner. He stated that the Subcommittee had tried to arrange with the public health authorities that immunization work be done by private practitioners as far as possible. He pointed out that it was necessary for the private practitioner to cooperate with the authorities in this matter, or the latter would be forced to take it over. The report was accepted as one of progress.

In the absence of the Chairmen of other Subcommittees the President asked for the reports of committees appointed to consider petitions of former Fellows for restoration to membership. (See Appendix No. 8.) The Secretary read the complete list and the recommendations were approved by the Council.

The Secretary stated that Dr. George L. Lemaitre of Methuen asked for restoration to membership and the President appointed an investigating committee consisting of Drs. John F. Curtin, Chairman, John G. Miller and Joseph L. O'Reilly.

The President appointed as Auditing Committee for the ensuing year Dr. Harry P. Cahill, Chairman, of Norfolk and Dr. Edmund H. Robbins, of Middlesex South. These appointments were confirmed by the Council.

The Secretary presented a request from the Medical Library Association that certain resolutions be adopted by the Council. These resolutions (see Appendix No. 9) were then presented and were formally adopted.

In carrying out the vote of the Council passed at the June meeting in Springfield, the President appointed a committee of five to consider the matter of expert testimony as given in courts of law by members of the Society. He appointed the following Fellows to serve on this committee: Dr. George L. Schadt, Chairman, Hampden; Dr. David Cheever, Suffolk; Dr. Francis

P. McCarthy, Norfolk; Dr. Walter G. Phippen, Essex South and Dr. James J. Goodwin, Worcester. The President's action was approved.

There was considerable discussion concerning the resolution presented at the meeting of the Council, held in February, 1936, by Dr. Levi of Middlesex South. It was finally voted to refer the matter to the Committee on Medical Education and Medical Diplomas.

The President asked the Secretary to read a communication received from the Massachusetts Public Health Association which was published in *The New England Journal of Medicine* for June 11, 1936. This contained a resolution asking for the appointment of a committee to serve as a liaison agency between the Massachusetts Public Health Association and the Massachusetts Medical Society. (See Appendix No. 10.) The Secretary announced that he had been directed by the President to inform the Massachusetts Public Health Association that the Subcommittee on Public Health and Practitioner of the Public Relations Committee would be designated to serve in this capacity. This action was approved by vote.

Dr. E. F. Cody of Bristol South, the senior Delegate from Massachusetts to the Annual Meeting of the American Medical Association, held in Kansas City May 11-15, 1936, presented his report. He stated that the attendance was unusually high and that distinguished guests from abroad were present at the meeting. In the meetings of the Scientific Assembly, twenty-eight Fellows of the Massachusetts Medical Society presented papers or led in discussions. The Society was likewise well represented in the Scientific Exhibits. He stated that the President, Dr. Mongan, was appointed Chairman of the Reference Committee on Executive Session and that Dr. Cody had served on the Reference Committee on Reports of the Board of Trustees and Secretary. He quoted from the figures of the Secretary's report which showed the number of members on March 1, 1936, 101,754 and the number of Fellows 62,997. He spoke briefly of the publications conducted by the American Medical Association. He quoted from the Treasurer's report which showed that the Association now has total assets exceeding three and one-half million dollars. He mentioned the work done by certain of the Councils and Special Committees of the American Medical Association. Many matters were covered under the heading of "new business" which will be found in the published Proceedings. He referred particularly to the effective work of the Reference Committee which had considered the study made by a committee appointed to study contraceptive practices and related problems. The Reference Committee approved of the committee's recommendation that the study be continued and concurred in the committee's disapproval of propaganda directed to the public by certain lay organizations.

He announced that at the last meeting of the American Medical Association the following officers were elected:

President-Elect, John H. J. Upham
Vice-President, Charles Gordon Heyd
Secretary, Olin West
Treasurer, Herman L. Kretschmer
Speaker, Nathan B. Van Etten
Vice-Speaker, Harrison H. Shoulders
Trustee, Thomas S. Cullen.

Dr. Cody's report was accepted by vote.

The President asked the Secretary to read the report of Dr. Hanford Carvell who had been appointed Delegate to the Annual Meeting of the Maine Medical Association. Dr. Carvell stated that he had attended the meetings on June 22 and 23 and that he had conveyed the greetings of the Massachusetts Medical Society. He commented on the cordial reception given to him.

The President announced that because of ill health Dr. Barré of Bristol South had been forced to resign from the Public Relations Committee and that the District Society had chosen as his successor Dr. Aubrey J. Pothier.

The President then announced that since Dr. Tighe of Middlesex North had arrived he would ask him to report for the Subcommittee on Social Legislation and Insurance of the Committee on Public Relations.

Dr. Tighe explained that the work of his committee in the education of the public concerning Compulsory Sickness Insurance was still going on, but that on account of political activities it appeared unwise to attempt radio broadcasts until after the election. He informed the Council that the results of the election would have a bearing upon the type of program adopted by the committee. He mentioned the fact that he had been invited to deliver a talk before the Massachusetts State Federation of Women's Clubs at its Ipswich meeting in the near future.

Dr. Tighe then gave an account of another matter which had been referred to the committee. This was an editorial which had appeared in *The New England Journal of Medicine* for September 17 entitled "A Suit Against a Physician." It appears that the physician's malpractice insurance does not protect him in certain cases of suits growing out of commitments of persons allegedly insane. The insurance companies state that under the law such suits are not for malpractice but are for conspiracy which is a criminal offense. Certain companies, however, have agreed to conduct the defense of the physician thus sued, but will not be responsible for the payments of awards resulting from

such suits. The committee has in mind various conferences with insurance companies and others which are designed to meet this complicated situation. Dr. Tighe's report was accepted as one of progress.

Dr. Hunt of Worcester reported for the Subcommittee of the Committee on Public Relations on the Adequacy of Medical Care and stated that a survey of five hundred families had been completed and published in the *Journal*. This was done at a cost to the Society of $500.00. The committee recommended that, inasmuch as an extension of this survey to the thousand families originally contemplated would probably not yield sufficient additional information to justify the expenditure of the balance of the $1,000.00 appropriation made by the Council, the study be discontinued. He referred to the action of the Council at the Annual Meeting last June by which the appointment of Medical Service Councils was approved. He stated that he had prepared a brief report on the question "Why a Medical Service Council?" This he expects to submit to the *Journal* for publication. In this communication will be outlined what is contemplated. The President stated that, if there were no objections, Dr. Hunt's recommendations concerning the Medical Service Councils would be referred to the Subcommittee on Public Health and Practitioner and that the Subcommittee on the Adequacy of Medical Care would be authorized to discontinue its survey. This action was confirmed by vote.

Dr. R. M. Smith, Suffolk, suggested the possibility of the Council's taking more definite action in relation to the form which these Medical Service Councils should take and stated that it seemed that such groups offered one of the most effective means of accomplishing the end in which we are all interested. The President stated that he believed the machinery was already at hand and that since some money was left from the original appropriation to the Committee on Public Relations, it would not be necessary to ask for additional money at this time.

Dr. Bagnall, Essex North, proceeded to read a resolution. (See Appendix No. 11.) Dr. Bagnall explained that Dr. Wakefield of the State Department of Public Health informed him that the formal approval of the program for the relief of crippled children was awaiting the approval of the Society. He stated that the public health authorities had gone all the way in cooperating with the medical profession. He recalled that there had been consultation with officers of the State Society at the beginning and that subsequently, at the suggestion of the President, each District Society President had been consulted. The plan finally adopted provides that anyone must have the endorsement of the family physician before he can be admitted to the children's clinic. He also referred to the committees appointed in each district which assure to the Medical Society the protection of its interest. He stated that the clinics are under the auspices of the Social Security Program of the Federal Government and that, while the operation is supervised by the State Department of Public Health, the entire matter comes under a federal rather than a state law.

President Mongan made certain further explanations of the activities being conducted under the Federal Security Act and stated that the Commonwealth was obliged by the federal law to go ahead with the program. He gave to the Council a list of the members of the General Advisory Board which assists the Public Health Commissioner in administering the law dealing with crippled children. He stated that Pittsfield, Greenfield, Springfield, Gardner, Lowell, Brockton, Fall River, Hyannis and Salem have already appointed their cooperating committees. The resolution presented by Dr. Bagnall was then adopted by vote.

Dr. W. G. Grandison, Middlesex South, called attention of the Council to what he considered to be an infringement on the rights of the general practitioner in connection with a commitment of the mentally sick. His statement was heard by the Council, and the President ruled that since this was a matter which concerned the practitioner and public health it would be referred to that Subcommittee of the Committee on Public Relations. There being no objection, it was so ordered.

Dr. Snow, Essex North, was recognized by the President and stated that he was instructed by the Essex North District Medical Society to bring to the attention of the Council the matter of a resolution adopted by the Roentgenological Society of North America in its executive session on December 3, 1935. (See Appendix No. 12.) He then offered comments submitted by the Essex North District Medical Society. (See Appendix No. 13.) The President stated that these resolutions would be referred to the Subcommittee on Hospital Relations.

Dr. M. C. Sosman, Suffolk, offered an explanation for the action taken by the Roentgenological Society and stated that he had communicated with the executive committee of that society, which has agreed to bring the matter up once more at the next annual meeting in December with the intention of withdrawing the resolution.

The President directed the Secretary to bring an additional matter to the attention of the Council. The Secretary stated that it has been proposed that the Council be notified at this time that official notice will be given at the

February meeting regarding proposed changes in the By-Laws as follows:

Chapter VI, Section 1 entitled Duties of President to be changed by striking out the sentence which reads, "He shall be *ex officio* chairman of the Committee on State and National Legislation" and by adding the sentence "He shall be a member of all Standing and Special Committees by virtue of his office."

Chapter VII, Section 6 entitled Duties of the Committee on State and National Legislation to be changed by striking out the words "the President being *ex officio* chairman" so that the first sentence shall read "The Committee on State and National Legislation shall consist of five fellows."

The President stated that this was offered for information and could not be acted upon at this session.

There then followed some comment upon the acoustics of the hall in which the meeting was being held and it was suggested by one of the Councilors, Dr. Kickham of Norfolk, that more adequate amplifiers be provided since it was impossible for the Councilors in the rear of the hall to follow discussions and to vote intelligently upon important matters. He made the suggestion, therefore, that the Secretary be instructed to remedy the situation. The President accepted the suggestion.

The meeting adjourned at 1:15 p. m.

ALEXANDER S. BEGG, M.D.,
Secretary.

APPENDIX NO. 1

ATTENDANCE OF COUNCILORS

BARNSTABLE
M. E. Champion
J. F. Jordan
C. H. Phillips

BERKSHIRE
R. J. Carpenter

BRISTOL NORTH
W. H. Allen
A. R. Crandell

BRISTOL SOUTH
J. M. Bonner
J. A. Barré
G. W. Blood
E. F. Cody
E. D. Gardner
P. E. Truesdale

ESSEX NORTH
E. S. Bagnall
R. V. Baketel
C. S. Benson
J. F. Burnham
Z. W. Colson
H. F. Dearborn
H. R. Kurth
G. L. Richardson
F. W. Snow

ESSEX SOUTH
C. A. Bonner
N. P. Breed
J. F. Donaldson

FRANKLIN
W. J. Pelletier
H. M. Kemp
H. G. Stetson
A. H. Wright

HAMPDEN
P. E. Gear
F. H. Allen
T. S. Bacon
E. P. Bagg
J. M. Birnie
J. L. Chereskin
Frederic Hagler
M. W. Pearson
A. G. Rice
G. L. Schadt
H. L. Smith

MIDDLESEX EAST
J. H. Blaisdell
Richard Dutton
E. M. Halligan
R. R. Stratton

MIDDLESEX NORTH
F. P. Murphy
A. R. Gardner
G. A. Lahey
T. A. Stamas
M. A. Tighe

MIDDLESEX SOUTH
S. H. Remick
C. F. Atwood
E. W. Barron
C. F. K. Bean
G. F. H. Bowers
C. O. Chase
F. R. Clark
B. F. Conley
A. C. Cummings
D. F. Cummings
H. F. Day
H. Q. Gallupe
W. G. Grandison
A. M. Jackson
A. A. Levi
R. A. McCarty
J. A. McLean
Edward Mellus
C. E. Mongan
F. L. Morse
J. P. Nelligan
E. J. O'Brien, Jr.
Dwight O'Hara
C. T. Porter
T. E. Reilly
E. S. A. Robinson
E. J. Sawyer
E. F. Sewall
F. G. Smith
H. P. Stevens
H. W. Thayer
Fresenius Van Nüys
R. H. Wells
M. W. White
W. S. Whittemore

NORFOLK
Maurice Gerstein
F. G. Balch
A. S. Begg
D. N. Blakely
H. M. Emmons
C. B. Faunce, Jr.
L. M. Freedman
W. A. Griffin
C. J. Kickham
H. M. Landesman
J. S. H. Leard
M. V. Safford
D. D. Scannell
Max Sturnick

NORFOLK SOUTH
C. S. Adams
G. V. Higgins
C. A. Sullivan

PLYMOUTH
Charles Hammond
P. H. Leavitt

SUFFOLK
Conrad Wesselhoeft
W. B. Breed
C. S. Butler
R. L. DeNormandie
J. M. Doran
G. B. Fenwick
Reginald Fitz
Channing Frothingham
Joseph Garland
G. L. Gately
E. P. Joslin
F. H. Lahey
T. H. Lanman
C. C. Lund
W. J. Mixter
N. A. Nelson
J. P. O'Hare
L. E. Parkins
Helen S. Pittman
W. H. Robey
Horatio Rogers
G. C. Shattuck
R. M. Smith
M. C. Sosman
I. J. Walker
Shields Warren

WORCESTER
R. J. Ward
J. C. Austin
W. P. Bowers
L. R. Bragg
P. H. Cook
G. A. Dix
E. B. Emerson
G. E. Emery
J. J. Goodwin
David Harrower
E. L. Hunt
E. R. Leib
W. F. Lynch
A. W. Marsh
J. W. O'Connor
W. C. Seelye
F. H. Washburn
R. P. Watkins
S. B. Woodward

WORCESTER NORTH
Sherman Perry
C. J. Laserte

APPENDIX NO. 2

REPORT OF THE COMMITTEE ON ARRANGEMENTS

The Annual Meeting of the Society in 1937 will be held in Boston. The best dates appear to be Tuesday, Wednesday and Thursday, June 1, 2, and 3, since the holiday May 30 falls on a Sunday and will therefore be observed on Monday.

I move that these dates be approved by the Council for the 1937 meeting of the Society.

Respectfully submitted,
HORATIO ROGERS, *Chairman.*

APPENDIX NO. 3

Report of the Committee on Membership and Finance on Membership

This Committee recommends:

1. That the following named four Fellows be allowed to retire under the provisions of Chapter 1, Section 5, of the By-Laws:

1. Cleary, James, Cambridge, with remission of dues, 1935, 1936.
2. McClusky, Henry Lincoln, Worcester, with remission of dues, 1934, 1935, 1936.
3. Moody, Flora Frost, Springfield, with remission of dues, 1934, 1935, 1936.
4. Howland, George Lewis, Jamaica Plain.

2. That dues of the following named three Fellows be remitted under the provisions of Chapter 1, Section 6, of the By-Laws:

1. Bailey, Florence, Lawrence, 1935 (part), 1936.
2. Hampson, Nishan M., Watertown, 1934, 1935, 1936.
3. Simon, Arthur Leslie, Lawrence, 1935.

3. That the following named eight Fellows be allowed to resign under the provisions of Chapter 1, Section 7, of the By-Laws:

1. Andrews, John Raymond, Burlington, Vt., with remission of dues, 1934, 1935, 1936.
2. Ely, Julian Griffin, Old Lyme, Conn.
3. Nolin, Francis Harry, Claremont, N. H., with remission of dues, 1934, 1935, 1936.
4. O'Meara, John George, Providence, R. I.
5. Rogell, Harold, Providence, R. I., with remission of dues, 1936.
6. Thompson, John James, Danville, Ill.
7. Smith, Lawrence Weld, Philadelphia.
8. Gilbert, Alfred Edmund, Nevada, Iowa.

4. That the following named seven Fellows be deprived of the privileges of Fellowship under the provisions of Chapter 1, Section 8, Clauses (a) and (b) of the By-Laws:

1. Baghdoyan, Nerses Manoug, Winchester.
2. Cliff, Frederica Leigh, Boston.
3. Fraser, William Leslie, Lynn.
4. Fuller, David Herman, address unknown.
5. Marcus, Jacob, Boston.
6. Mason, James Herman, Worcester.
7. Worthy, William, Boston.

David N. Blakely, *Chairman.*

October 7, 1936.

APPENDIX NO. 4

Letter to Be Sent to the Fellows of the Massachusetts Medical Society

To the Fellows of the Massachusetts Medical Society:

With the knowledge that the opening of the General Court is but a few weeks away, undoubtedly many individuals have in mind legislation designed to correct injustices or to promote the interests of the medical profession.

Undoubtedly, as in the past, some such legislation will be proposed in good faith and with the best intentions but without thorough study and consideration by the proper committees of the Society.

It is therefore requested that, if the support and backing of the Society are desired by proponents of medical legislation, either individual Fellows, committees or even state departments, that such proposals should be submitted to the Secretary for presentation to the Committee on State and National Legislation for study and report.

Charles E. Mongan, *President.*
Massachusetts Medical Society.

APPENDIX NO. 5

Report of the Committee on Permanent Home

Since the last meeting of the Council, the Agreement with the Boston Medical Library regarding the contribution of the Massachusetts Medical Society to the expenses of the Boston Medical Library by reason of the occupancy of the Medical Society of its headquarters in the Library, came up for renewal and this agreement has been renewed for the next three years and has been completed and signed by the President of the Library and the Chairman of the Committee on Permanent Home, at the same rate as was accepted for the previous period.

Respectfully submitted,
R. B. Greenough, *Chairman.*

APPENDIX NO. 6

Report of the Committee on Cancer

The Committee on Cancer respectfully reports that it has continued to cooperate with the cancer educational activities carried on by the Massachusetts Department of Public Health and the Massachusetts Branch of the American Society for the Control of Cancer. In this connection, the Committee has offered its cooperation in the national project of the American Society for the Control of Cancer, which is now being organized as the "Women's Field Army" of the American Society, which is designed to promote the education of the public in regard to cancer through the National Federation of Women's Clubs. The campaign for the enlistment of workers in this Women's Field Army is to take place in March, 1937.

Respectfully submitted,
R. B. Greenough, *Chairman.*

APPENDIX NO. 7

Report of the Committee on Postgraduate Instruction

October 7, 1936.

The Committee wishes to report that the extension courses have been organized throughout the state. Sixteen districts are participating; the first sessions will begin today in the Middlesex East and Hampshire Districts. The entire series will be completed by January 1, 1937.

Frank R. Ober, *Chairman,*
Leroy E. Parkins, *Secretary.*

APPENDIX NO. 8

Reports of Committees to Consider Petitions for Restoration to the Privileges of Fellowship

(1) Theodore Bennett, Brookline. (Committee: Charles J. Kickham, Frederick L. Hayes and Arthur I. Shain.)

(2) William E. Buck, Randolph. (Committee: Cornelius A. Sullivan, Frank W. Crawford and Nahum R. Pillsbury.)

(3) Aaron Kaufman, Boston. (Committee: Joseph J. Skirball, Allen P. Joslin and Maurice B. Strauss.)

(4) Lawrence K. Kelley, Tewksbury. (Committee: John H. Lambert, Howard W. Jewett and Harold L. Leland.)

(5) William E. Langevin, Southbridge. (Committee: Alvin R. Moses, Theodore L. Story and Stuart M. Gibson.)

(6) A. H. Riordan, Indian Orchard. (Committee: Michael W. Harrington, Arthur J. Horrigan and George L. Steele.)

(7) Arthur F. Sargent, Boston. (Committee: Francis C. Hall, Robert H. Morris and Edward Harding.)

(8) George E. Tucker, Salem. (Committee: Henry Tolman, Jr., J. Frank Donaldson, and DeWitt S. Clark.)

(9) John Verdone, Boston. (Committee: Gerardo M. Balboni, Fletcher H. Colby and Harlan F. Newton.)

(10) P. H. Walsh, Fall River. (Committee: George C. King, James C. McAdams and Howard P. Sawyer.)

(11) Daniel Wexler, New Bedford. (Committee: Edwin D. Gardner, Daniel P. O'Brien and Frank M. Howes.)

APPENDIX NO. 9

Resolutions Asking Congress to Support Work of the Surgeon-General's Library

In response to a request received from the Medical Library Association the following Resolution is offered for adoption:

WHEREAS, The value and usefulness of the *Index-Catalogue* is dependent upon the completeness of the files of medical publications contained in the Library of the Surgeon-General's Office—a public national, medical library, the greatest in the world, serving in its present form of administration with satisfaction to the medical profession and the medical libraries of our country, and

WHEREAS, In recent years the annual appropriation of the Congress has been wholly inadequate to provide sufficient funds to acquire the current medical books and periodicals issued throughout the world, so that they might be available for use throughout the country and for inclusion in the *Index-Catalogue*,

THEREFORE BE IT RESOLVED, That the Massachusetts Medical Society urges the Congress to appropriate annually to the Library of the Surgeon-General's Office an adequate sum for current medical books and periodicals and for the purchase of back publications lost during those recent years when the amount granted was grossly inadequate, thus depreciating the completeness and usefulness of the Library's collection; and an additional sufficient sum annually, for as many years as may be required, in order to make for the greatest possible completeness of the collection and its Catalogue; and

BE IT FURTHER RESOLVED, That this Resolution be published in full in *The New England Journal of Medicine* and that reprints of the Resolution as published be sent to Representatives and Senators from Massachusetts following the November elections.

APPENDIX NO. 10

Extract from *The New England Journal of Medicine*, issue of June 11, 1936:

The Massachusetts Public Health Association

Report of the Committee on the Relationship of Boards of Health to the Medical Profession

" . . . 5. Finally, be it resolved that to further these mutual interests of Health Departments and physicians it is recommended that the Massachusetts Medical Society be invited to appoint a committee or delegates to meet with a committee of the Massachusetts Association of Boards of Health to discuss from time to time matters of joint interest and concern."

APPENDIX NO. 11

Resolution on Clinics for Crippled Children

It is hereby resolved that the Council of the Massachusetts Medical Society endorses the program of the Clinic for Crippled Children as outlined by the Department of Public Health and hereby expresses its approval of the manner in which the Department of Public Health has endeavored to cooperate with the Massachusetts Medical Society.

APPENDIX NO. 12

Resolution Concerning Radiologists' Relation to Hospitals

"WHEREAS, proper ethical standards of a physician are essential for the securing or the retention of membership in the Radiological Society of North America, and

"WHEREAS, certain physicians have by the replacement of more ethical physicians aided certain lay groups and corporations in their attempts to practise radiology, and

"WHEREAS, such practices are inimical to the best interest of medicine, of radiology and of the radiologists concerned,

"Now therefore be it,

"RESOLVED, that it is unethical for any radiologist to replace another radiologist in an institution without the consent of the incumbent, except for cause, and provided that if cause be claimed the matter shall be referred to the Counselor for the State in which the incumbent resides, the said Counselor being hereby directed to form a tribunal to be composed of the said Counselor, a physician representing the incumbent, a physician representing the applicant and a representative of the institution involved and one additional member to be chosen by these. This tribunal shall examine the allegations and matters in controversy and shall render a decision forbidding or permitting the replacement of the said incumbent, and

"Be it,

"FURTHER RESOLVED, that violation of these rules shall constitute unethical conduct and shall be grounds for expulsion from this Society."

This resolution was adopted by the Radiological Society of North America in Executive Session at its twenty-first Annual Meeting on December 3, 1935, at Detroit, Michigan.

Reprinted from *Radiology*, 26:247 (Feb.) 1936.

APPENDIX NO. 13

Comments by the Essex North District Medical Society at Its Annual Meeting in Salem in May, 1936

The Essex North District Medical Society at its Annual Meeting in May, 1936 voted to present the resolutions adopted by the Radiological Society of North America to the Council of the Massachusetts Medical Society with the following comments:

"These resolutions are an arrogant invasion of the rights of hospitals and physicians. The Society appropriates for its members the exclusive use of equipment owned by hospitals and claims for them life tenure of office. It prescribes penalties for infraction of its rules which amount virtually to a boycott of hospitals. To extend these principles to all Departments of Medicine would be fatal to the spirit of progress. What if the American Surgical Association and other special societies should attempt to support the claims of their members for exclusive rights in designated Communities?

"These resolutions should not be accepted supinely by hospital trustees and physicians. The hospitals own the equipment and have some voice in its use. It might be inconvenient to dispense with the services of highly specialized radiologists but a showdown on this subject would demonstrate effectively that their ideas have become decidedly overinflated."

This matter is brought to the Council because it is felt that if such an attitude is adopted by any subdivision of the Medical Profession it will tend to disrupt the practice of medicine as a whole. The District Society feels that these resolutions suggest the principles of Union Labor. If they are carried a little farther it is easy to visualize a hospital being boycotted because of unfair treatment to its Radiological Staff. One can almost see a picket line with the medical profession marching in front bearing the placards: "This hospital is unfair to Union Doctors."

The Essex North has no motion to offer. It firmly believes that the Radiologists of Massachusetts as a body do not approve of such drastic measures, but it does feel that this matter is of sufficient importance to be brought to the attention of the Parent Society.

ANSWERING S O S CALLS OF A NATION

When floods swept Eastern States and tornadoes devastated four Southern cities this spring, the Red Cross was on the job, to help the injured and homeless.

These disasters, affecting more than a hundred cities and towns and large sections of our rural population, imposed the greatest task on the Red Cross Chapters and upon the National organization since the Mississippi flood in 1927.

Beginning on April 13, when quick thaws melted millions of tons of snow and ice on New England hills, turning placid streams and leisurely rivers into raging torrents, calls for assistance were made upon the Red Cross. Chapters in the affected areas sprang into action to care for those made homeless and National personnel was sent to points where additional help was needed.

A return of cooler weather stemmed this first rise of Eastern rivers, leading many to believe that the principal danger was past. But in this lull just prior to the rivers' second and more serious rise the Red Cross fairly hummed with activity. Chapters in threatened areas perfected disaster relief organizations previously set up "just in case a disaster should strike".

As a result of this planning and cooperation, the record-breaking flood stages of April 17 and 18 did not find communities unprepared. Excitement ran high, but underlying individual uncertainty and fear was the consciousness of organized effort under definite leadership. Some groups undertook the work of getting families from their homes and preparing food, others went to work establishing temporary shelters in schools, and public buildings, others handled clothing distribution, first aid units functioned to give emergency care to the injured and to see that they received medical care and, if needed, hospitalization.

So well did this volunteer organization and the cooperating agencies function that less than 70 lives were lost in these spring floods.

Another type of Red Cross disaster relief work was exemplified in the South, when terrific tornadoes made shambles of four cities in Georgia, Mississippi and North Carolina. Here there was no warning. Death-dealing destruction hit as swiftly and unexpectedly as would an air raid from another planet. Aiding the sick and injured and providing emergency care for the thousands made homeless was the Red Cross job.

After meeting the emergency needs of the victims of both the floods and tornadoes, the Red Cross began the work of rehabilitation, assisting those families without resources to rebuild, repair and refurnish their homes. This task required the services of many trained disaster relief workers, since each family's requirements were considered individually.

Never has the worth of the Red Cross, with its more than 3,700 Chapters and 9,000 Branches, organized in practically every county in the United States, and its experienced National Staff, been more clearly demonstrated on disaster scenes than in these floods and tornadoes. Your continued support through enrollment in your local Red Cross Chapter is necessary to keep the Red Cross prepared to answer future appeals for help and to continue its normal peacetime programs of first aid and lifesaving, nursing, assistance to war disabled veterans, and so forth, in your community.

Join during the Roll Call, held each year from Armistice Day to Thanksgiving.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE MORTEM AND POST MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

FOUNDED BY RICHARD C. CABOT, M.D.

TRACY B. MALLORY, M.D., *Editor*

CASE 22451

PRESENTATION OF CASE

A 47 year old Canadian housewife was admitted complaining of hematemesis.

For about 8 years the patient noted epigastric discomfort associated with sour regurgitation. No details relative to these symptoms were noted except that they were successfully treated by diet and alkalies. During the 3 years preceding entry at irregular intervals she suffered seven hematemeses. The vomitus consisted of bright red blood and occurred without apparent provocative cause or warning. The amount of blood varied from a cupful to a half a washbasinful. On two occasions two days of midepigastric discomfort preceded the vomiting. Each time the patient was treated by bedrest, parenteral fluids, and once by a transfusion. Between attacks she enjoyed relatively good health. Repeated x-rays failed to show any significant abnormality but splenomegaly was noted. On the morning of entry she had a considerable amount of epigastric discomfort shortly after breakfast and then vomited about two-thirds of a basinful of fresh blood, clots and cereal. The abdominal pain was relieved but she felt faint and weak. The hemorrhage preceding this had occurred 3 weeks before admission.

Physical examination showed a well-developed and nourished, pale, sweating woman with dry, pallid mucous membranes. The heart was not enlarged but a soft systolic murmur was audible at the apex and the pulse was rapid and of poor quality. The blood pressure was reported as satisfactory. The lungs were clear. The abdomen was distended and careful palpation showed the liver to be enlarged two fingerbreadths beneath the costal margin and the spleen was said to be readily palpated although no details were given. An almond-sized node was palpated in the left axilla.

The temperature was 98.6°, the pulse 120. The respirations were 24.

Repeated urine examinations were essentially negative. The specimens contained no bile. The blood showed a red cell count of 3,800,000, with a hemoglobin of 65 per cent. The white cell count was 13,000, 83 per cent polymorphonuclears. Repeated stool specimens gave positive reactions to the guaiac test on only the first 2 days in the hospital; thereafter they remained consistently negative. The clotting time was 9 to 13 minutes. A sedimentation rate was 20 millimeters in 60 minutes. The van den Bergh test showed 0.45 milligrams of bilirubin and a liver function test showed 50 per cent dye retention in the serum. Clot retraction was normal. The nonprotein nitrogen of the blood was 20 milligrams and the serum protein was 5.3 grams.

An x-ray examination showed numerous tubular filling defects consistent with varices in the lower two-thirds of the esophagus. The stomach and duodenum were negative but the shadow of the spleen was unusually low.

The patient was treated supportively during the next 2 weeks and received several transfusions. Her red blood cell count gradually diminished to 2,400,000 during the first week but subsequently rose to the level at admission. On the fifteenth hospital day a splenectomy was performed and vessels on the lesser curvature of the stomach were ligated. One day later she suddenly vomited 30 ounces of blood and went into shock. This was successfully treated by transfusion and the blood pressure rose to 120/80. On the second postoperative day the temperature fluctuated between 100° and 102°. One week after the operation she again vomited a large amount of blood and, despite supportive measures, failed rapidly and died.

NOTES ON THE HISTORY

DR. WYMAN RICHARDSON: We have here a history of sudden vomiting of blood for a period of 3 years and of other symptoms that go back perhaps 8 years.

It is my experience in discussing these cases that one cannot say that a liver is enlarged because it is palpable two fingerbreadths below the costal margin. No mention is made of the upper limit of dulness, but I suppose we must presume, since the impression was recorded that the liver was enlarged, that some attempt was made to see how high the liver went.

"The white cell count was 13,000, 83 per cent polymorphonuclears." We are not certain when that count was done in relation to the hemorrhage. Presumably it was done immediately after the patient came in.

The great difficulty with the sedimentation rate is that everyone does it a different way and few people bother to correct for the hematocrit. In any case I should say this was a fairly normal figure.

I would be interested to have Dr. Hampton tell us whether there was fluid in the abdomen,

or whether there was gas, aside from the other interesting findings.

DR. AUBREY O. HAMPTON: We have no films of the abdomen. We have just the esophagus and the upper part of the chest. Here are the tubular filling defects that are described. They are spaghetti-like, very irregular, and extend upward almost to the orifice of the esophagus and down to the fundus of the stomach. They involve the esophagus all the way. Even when the esophagus is filled you can see the tubular defects. Here is what appears to be a blood vessel in profile circling in that direction. We did not fill the stomach. I do not see any fluid in the pleural cavity. Here is a shadow that is quite typical of an enlarged spleen. I cannot tell anything about the right side of the abdomen.

DR. RICHARDSON: The x-ray, then, shows esophageal varices and no fluid in the chest, which would suggest that there was probably not a huge amount of fluid in the abdomen, although there may be some.

DIFFERENTIAL DIAGNOSIS

On reading over this record one would say that there was an obvious diagnosis to make and the whole problem is whether it is too obvious or whether Dr. Mallory is giving me an easy case and trying to make me think it is hard. There are certain things about it that are a little bit disturbing. As far as accounting for the vomiting of blood is concerned, there does not seem much point in going over all the possibilities. I think we can rule out such curious things as diaphragmatic hernia. I think ulcer is ruled out and cancer would be unlikely. Such a condition as polyp or lymphoma of the stomach which might not show by x-ray is going very far afield in the presence of these varices. So I think we have to assume some condition that is related to dilatation of the veins of the esophagus and also to splenomegaly. The condition which is associated with thrombosis in the splenic veins—we had a case that we discussed about a year ago—is much more frequently seen in children or young adults than it is in a patient of this age. The history apparently goes back about 8 years. We do not know, however, that the epigastric discomfort was necessarily related to this picture. There is no history of alcoholism. She did have an increased cell count. Cases of cirrhosis of the liver with splenomegaly tend to run a low white count, oftentimes even in spite of hemorrhage. There is no evidence of bile retention and we are not at all sure in regard to ascites and that is the difficult thing here. If this is a cirrhotic liver it would account for the esophageal varices. It would explain the 50 per cent dye retention. One would rather think she should have accumulated some fluid in the abdomen. If you go looking for other causes of thrombosis the only thing that comes to my mind is polycythemia vera. That is a common cause of thrombosis, usually arterial, I should say, although it might be venous. If you want to try to fit that picture into this case you can say that this patient had a considerable number of hemorrhages that seemed very severe, that she responded very quickly, and that she tended to have a high white count. But there is no mention made of platelets, and if you had that patient in front of you, having bled out, I do not see how you could make the diagnosis. So that, to come back to cirrhosis of the liver, I should think it was foolish to make any other diagnosis in this case although there are one or two things I do not like about it. I am not prepared to say what type it may be, but I shall say it is portal cirrhosis because it is the simplest word I can think of at the moment. With this degree of impairment of circulation I should think that the liver would be small rather than large in the majority of cases. That bothered me a little. Another thing is, can we rely on a liver dye retention test when it gives 50 per cent retention, which in my experience usually means something pretty definite. I think that and the big spleen are against any malignant process. If there is malignancy it must be secondary to some other process. I shall say it is a case of cirrhosis of the liver with esophageal varices and death from hemorrhage.

CLINICAL DISCUSSION

DR. CHESTER M. JONES: Dr. Richardson has outlined the diagnosis, I should say, and I cannot see how there should have been any doubt about it from the first. I followed her through the summer. I first saw her in Maine just after she recovered from a hemorrhage. She had a second one a month later. It was a very curious situation. She had a hemorrhage and the blood pressure never dropped and what Dr. Richardson said about her satisfactory blood pressure was quite right. It was always 120-115/80, in spite of a very big hemorrhage. She was kept in the Maine General Hospital for 2 weeks, until the hemorrhage stopped, and was brought here. About 3 weeks later she had her next and largest hemorrhage and came in to the Baker Memorial at that time. The outstanding feature—and I think it is important in the diagnosis of these cases—was that from the very first in examining her during the hemorrhage you could be sure of two things that could be percussed. In the first place it should have been mentioned that the upper border of the liver dulness was in normal position, at the fifth rib. The percussion area was increased and the liver was felt two fingerbreadths down. The other thing, which was very easy to make

out by percussion, was what seemed to be a very large spleen. I suppose it could have been something else. When these cases of bleeding come into the hospital we do not want to examine the abdomen except superficially. Percussion at times ought to make a diagnosis. We have had at least 3 cases this year where diagnosis was made by percussion. We found a large spleen by that means and then came to the conclusion that we were probably dealing with cirrhosis of the liver rather than ulcer or cancer or something of that sort. The spleen therefore could be percussed and was easily palpated. She had some fluid in the abdomen. The abdomen was doughy. Another interesting point was that in going over the history it was absolutely impossible to get a story of a preceding cause for cirrhosis. There was no history of alcohol, no infections of any sort, and she was never jaundiced. Another point that at least interested me was that she had gone 4 years having one hemorrhage after another which is a rather long time for a case of cirrhosis of the liver to go. I think we had one patient, an old alcoholic, that has been on the ward ten or fifteen times over a period of 12 years with bleeding. He undoubtedly has some change in the liver, which is in the nature of a cirrhosis. I think, however, his bleeding may have been due to an acute exacerbation of chronic gastritis which I think does cause bleeding at times. Such a diagnosis should not be made until everything else is ruled out. The varices in the case under discussion are much more striking than in most of the pictures we see in this hospital. They are usually not seen under the fluoroscope. It is also true that in this instance the varices went up higher in the esophagus than usual.

We put the situation up to the family because one could see that the patient would most certainly die of hemorrhage if nothing were done. For that reason I asked Dr. Allen to consider a difficult technical procedure, hoping we might be able to cut off enough blood supply to the esophagus to at least temporarily—and by temporarily I visualized a year or so, possibly longer—cut down the number of hemorrhages which were increasing in frequency. It was admittedly a rather desperate attempt and everybody realized that before operation. We all felt that the diagnosis was pretty clear.

Dr. Arthur W. Allen: Quite a number of years ago Dr. Judd suggested the possibility of splenectomy to reduce hemorrhage from esophageal varices. This was afterwards taken up as a study by Walters who demonstrated the actual amount of blood flow by injecting specimens through the splenic vessels; that is, where the blood actually went in relationship to the portal vein, whether it was obstructed or not. From this it was obvious that a very large proportion of the blood which has to go through the esophageal veins can be reduced if you remove the spleen and also ligate the vessels along the lesser curvature of the stomach. Several years ago we had a boy come into the medical wards with repeated gastric hemorrhages. He had been treated at the Children's Hospital some time before but having reached the age of 12 he came to us, and on the basis of this work of Walters and Judd a splenectomy was done. The boy was all right for a year and then bled again and came back. At that time he was esophagoscoped—it was before we could diagnose esophageal varices readily by x-ray—and varices were found in the esophagus. So that another operation was done to interrupt the vessels on the lesser curvature of the stomach, and later by esophagoscope it was obvious that the veins had been greatly reduced in size. He had one hemorrhage a year later and since then has been all right. He was traced less than a year ago and we found that he had had no hemorrhages for the past 6 or 7 years.

It was on the basis of the possibility of being able to interrupt a considerable portion of the blood flow through the esophageal varices that this operation on this patient whom we are discussing today was finally undertaken. The spleen was large, as shown in the x-ray, somewhat adherent, but not very difficult to remove. There were perhaps no more than normal extra vessels in the form of vasa brevia, and so forth, that you get between the spleen and the fundus of the stomach, and the vessels along the lesser curvature of the stomach were not enlarged. We knew that and it did not disturb us particularly, because in the other case I spoke of they were not enlarged; but we found other conditions which were very interesting to us and which we realized meant that probably this operation in this instance would not be successful. After getting the spleen out of the way we found a perfectly enormous plexus of veins practically amounting to a cavernous hemangioma lying behind the spleen above the pancreas. We could see an enormous vein going along the diaphragm, a vein as large as my finger, and we felt that we could not safely interrupt that. We did not know exactly where it came from or where it was going so we did not attempt to do anything about it. So we were not surprised when she continued to bleed.

In the September, 1936, issue of the *Archives of Surgery* there is an article by Dr. J. P. Simonds of Chicago entitled "Chronic Occlusion of the Portal Vein" that describes the condition which we found in this patient. If any of you care to read it I think it would answer the whole question. I think Dr. Mallory will say that what he found will correspond pretty accurately with the drawing shown in that article.

There is one question I would like to bring

out before the pathologic side is talked about. That is, that this patient's two sisters had positive Hintons. You might express some opinion as to whether you think that could conceivably have something to do with the pathology.

DR. JONES: We did not get a positive Hinton on the patient's blood. Incidentally, we went over the history before operation to see if we could get a history of abdominal distress at any time to explain splenic vein thrombosis. We were not able to get it.

CLINICAL DIAGNOSES

Cirrhosis of the liver.
Splenomegaly.
Esophageal varices.

DR. WYMAN RICHARDSON'S DIAGNOSES

Cirrhosis of the liver (portal?).
Esophageal varices with hemorrhage.

ANATOMIC DIAGNOSES

Cirrhoses of the liver, type undetermined.
Portal vein thrombosis, acute.
Esophageal varices with perforation and hemorrhage.
Ascites.
Retroperitoneal collateral venous plexus with anomalous left phrenic vein.
Operative wounds: Splenectomy, ligation of left gastric vein.

PATHOLOGIC DISCUSSION

DR. TRACY B. MALLORY: The postmortem on this patient showed, of course, as we expected, a very definite cirrhosis of the liver. The liver was rather coarsely nodular. It was approximately normal in size, weighing 1,500 grams. I cannot say that it was either large or small. There was nothing in gross or on microscopic examination to give us any definite lead as to what the etiology might be. The spleen, as you have heard, had been removed and the portal system of veins was naturally the focus of our interest and attention. One of the major dangers of splenectomy in cases either of thrombosis of the splenic vein or cirrhosis of the liver is the likelihood of development of acute thrombosis somewhere in the portal area postoperatively. There was no clinical indication of that in this case but we did find a large fresh thrombosis starting in the portal vein at just about the junction of the splenic and superior mesenteric veins almost completely occluding the portal vein and its two primary branches of the liver. To what extent death was due to this thrombosis or due to the final terminal hemorrhage from the varices which we also found, I am not sure. I imagine both elements played a rôle.

As Dr. Allen described, there was a very complicated collateral circulation in this case which I do not believe we more than began to unravel. The most striking feature of it was a very marked dilatation of the left phrenic vein. That is ordinarily such a small vessel that it would never be noticed in the course of routine postmortem examination, probably hardly be noticed in surgical operations; but in this case it was a very significantly large vessel. Under ordinary conditions the right phrenic vein empties into the cava, the left into the left renal vein. In this case the left phrenic entered the left ovarian vein, which meant a difference of one half or three quarters of an inch in its usual spot of insertion. There were a great many other dilated vessels in the immediate neighborhood which are normally so small that they lie way beyond the realms of nomenclature. The question has come up as to whether an attempt to tie that vessel would have done any good. To my mind it would have been inadvisable because it seems as though its function must probably have been partially to drain the varices and to return at least part of the blood in them to the cava. In other words, the flow of blood in the vein was probably away from the esophageal varices.

How do you feel about it, Dr. Allen?

DR. ALLEN: In this article which I mentioned, that point is brought out. I think that is perfectly true and because we did not know whether it would do good or harm we left it, fortunately. This is a fairly rare anomaly apparently, as Dr. Simond's report includes one case of his own and six from the literature.

DR. JONES: I should like to add one suggestion. It seems to me we have taken Banti's disease and used it as a wastepaper basket for a lot of queer cases with large spleen and cirrhosis of the liver. Banti's disease was originally described as thrombosis of the splenic vein. It may be that there is a certain form of cirrhosis of the liver secondary to such a vascular accident. This case may be of such a nature. It is not entirely comparable to what is called alcoholic cirrhosis; that is, portal cirrhosis associated with heavy drinking, and so forth. It may be that this sort of vascular network is not present when the disease is primarily intrahepatic. One might hook some of these cases, where the whole vascular venous system is interfered with, with those that fall into the group of Banti's disease. That term at present really means nothing except spleen, liver, and portal system disease.

CASE 22452

PRESENTATION OF CASE

A 55 year old English housemaid was admitted complaining of nausea, vomiting and constipation.

For several years the patient had suffered frequently from weak spells, nausea, gaseous eructation, aching pain in various portions of the body, and numbness of the extremities. Occasionally there was abdominal distention and vomiting. These symptoms usually occurred, according to the patient, after dietary indiscretions and she limited her diet frequently to clear broth and bread. She had been examined a number of times in the Outpatient Department and no diagnosis of organic disease had been established. About two and a half weeks before entry the patient fell and sustained several contusions but had no evident serious injury. Two days later she developed constipation, gaseous eructation, and occasional attacks of nausea and vomiting. These were more severe than the symptoms previously experienced and she eventually was unable to retain either liquids or solids. Subsequently she developed a sense of abdominal distention and had vague colicky pains in various portions of the abdomen. During the succeeding week the constipation progressed to the point where an enema was necessary to produce a bowel movement. Vomiting following the ingestion of food became constant and obstipation ensued about one week before entry. There was no flatus but frequent and voluminous gaseous eructation served to relieve her abdominal distention. A plain x-ray film of the abdomen at this time showed a large amount of gas in the transverse and ascending colons and some gas in the small bowel, which was not dilated. The kidneys were negative and a Graham test was unsatisfactory. The day before entry the symptoms abated temporarily but following a single spoonful of food she was seized with severe generalized abdominal pain and the nausea and vomiting returned. A physician administered a sedative and advised her to enter the hospital. The patient stated that she had lost about eight pounds in the two weeks preceding entry. There had been no melena or hematemesis.

Nineteen years before admission the patient had been operated upon for a tubal pregnancy and the right tube and ovary and the appendix were removed.

Physical examination showed a slender, pallid, apprehensive, middle-aged woman gagging frequently and attempting to vomit. Occasionally she succeeded in raising small amounts of frothy slimy material. The skin was cool and the tongue moist. The heart was normal and the lungs clear. The abdomen was slightly distended and tympanitic. Slight nonlocalized tenderness was elicited but there was no spasm, rigidity, or masses. Rectal and vaginal examinations were negative.

The temperature was 99.8°, the pulse 80. The respirations were 20.

Examination of the urine was negative. The blood showed a red cell count of 4,300,000, with a hemoglobin of 65 per cent. The white cell count was 16,300.

Another plain film of the abdomen now showed a large amount of gas in the dilated transverse colon and considerable gas and fecal material in the ascending colon. The gas in the transverse colon stopped abruptly just proximal to the splenic flexure. The small bowel was slightly dilated and also contained considerable gas. A barium enema showed that the column flowed to a point about 6 centimeters above the left iliac crest where it met complete obstruction. The obstructing end of the mass was convex and bulged into the lumen of the bowel. It appeared to have a slightly larger diameter than the bowel just below it. In the left upper quadrant overlying the eleventh rib there was a doughnut shaped shadow with a central mottled area of decreased density and the end of the gas filled transverse colon was seen to project into this circular shadow. Between the circular shadow and the obstructing mass below there was a hazy somewhat indefinite tubular shadow.

Shortly after entry a laparotomy was performed.

Differential Diagnosis

Dr. Grantley W. Taylor: I think it is worth while to review the history of the illness briefly. What had been going on for several years in the way of distention, vomiting and gaseous eructation was apparently tolerable to the patient. We might raise the question of biliary tract disease, which often would explain these symptoms; but the patient was apparently willing to attribute them to dietary indiscretions and had worked out a mode of coping with the problem when it arose.

Two and a half weeks before she came in she had a fall and immediately following this she developed a more marked attack than she had had before, with pain, distention, constipation and vomiting which became progressively more severe. Where she was all that time, I do not know. They were willing to take an x-ray examination but apparently they did not feel that she was sick enough to warrant sending her right into the hospital. The x-ray film showed a good deal of intestinal distention, especially in the colon. The day before she came in she had severe abdominal pain, which sent her into the hospital, and more nausea and vomiting. The loss of eight pounds simply reflects the fact that she had been taking practically nothing by mouth and was vomiting everything she took.

"The skin was cool and the tongue moist." That is very interesting in connection with an apparent obstruction that has been going on

for a matter of over two weeks and complete for a week. She must have been absorbing some of her fluid intake.

It is very interesting to have such a leisurely pulse rate in a patient with acute obstructive symptoms for a considerable time.

One thing you can get from the laboratory findings is that she has surprisingly little anemia—4,300,000 is a pretty good red count—and perhaps some loss of color index. The white count and temperature might indicate an inflammatory process or disturbance of the vascularity of the bowel although neither one of them is high enough to justify the assumption that we are dealing with gangrenous intestine. The pulse of 80 is very difficult to reconcile with anything involving gangrene of the intestinal tract.

It sounds to me as if the radiologist were attempting to describe in very objective terms an intestinal intussusception. Will you elucidate your picture?

Dr. Richard Schatzki: Here is the view of the first plain film obtained several days before admission to the hospital. The ascending colon and transverse colon are filled with air and slightly dilated, certainly not very much so. This is the plain film on the day of entrance and you see now a definitely dilated cecum, fecal filled hepatic flexure and markedly dilated transverse colon, with a peculiar end, as well as distention of the small intestine. Dr. Petersen did the enema. He saw a complete stop in the descending colon about six inches below the splenic flexure. The end of the block was very smooth and, as you heard in the report, the bowel seemed to be a little larger in that region than it was in the colon below. There were several reasons which prompted us not to be satisfied with the diagnosis "obstruction by tumor" but to try to analyze the picture further. First, there was the unusual smooth border of the obstructing mass; secondly, the increased size of the colon just in the region of the obstruction; thirdly, the unusual appearance of the soft tissue proximal to the region of the obstruction. These changes extended from the area of obstruction in the descending colon up into the transverse colon. The marked dilatation of the colon by air stopped within the transverse colon. There was apparently pathology beginning in this region and extending along the splenic flexure in the descending colon. If one would explain all changes by tumor itself, one would have to assume a tumor which runs around the splenic flexure, in other words, a "bending" tumor. Dr. Mallory will probably say that this may occur, but I think it is very unusual.

Dr. Tracy B. Mallory: It is pretty uncommon.

Dr. Schatzki: Here is another film showing the soft tissue mass in the region of the splenic flexure containing a narrow air channel much narrower than that of the dilated colon proximal to it. All these signs together caused us to make our final diagnosis.

Dr. Taylor: This is a very interesting picture and a very ingenious interpretation undoubtedly; but we have not the benefit of their point of view. Certainly we have virtually complete intestinal obstruction of two weeks' duration or thereabouts and localized by the x-ray to the distal half of the transverse colon and the upper part of the descending colon. It seems to me that our chief interest from the surgical viewpoint is to know whether we are dealing with a simple mechanical obstruction or whether we also have impairment of the blood supply of the bowel wall. She is surprisingly well on physical examination for somebody who has gangrene or strangulation of the intestine. In favor of gangrene would be perhaps the very sharp abdominal pain she had before entry, the white cell count and the renewed intensity of vomiting which occurred the day before, and some temperature. On the other hand she had negligible local abdominal findings except for slight tenderness and distention. She has not beginning peritonitis certainly, at least it is not obvious. It would be well to know if they could hear a peristaltic rush consistent with obstruction, or whether she had a silent bowel. She is not completely dehydrated. Her pulse rate is slow. All these things are against a gangrenous process in the bowel, considering the fact that her symptoms have been going on for so long. I do not think we need to go into very many possibilities in the light of our x-ray note. As Dr. Schatzki has pointed out, it is unusual to see malignancy going around the corner and shaping itself to the normal course of the intestine. Against malignancy, also, is the fact that she has had no bleeding at any time, and that she has for years had some obstruction of the gastrointestinal tract which has been mild, and the acute exacerbations were of relatively brief duration. The anemia also is not in keeping with that which you would expect to find from malignancy of the colon which had progressed to the point of obstruction.

Intussusceptions are unusual in this part of the bowel unless they are precipitated by some benign lesion inside the bowel or possibly favored by the presence of some extrinsic pathology. I think if we assume she has an intussusception, as the x-ray facts suggest, it would be reasonable to assume the existence of a benign tumor as causative of the intussusception. I do not see how we can account for the obstruction on the basis of any other of the usual causes, such as volvulus, foreign body in the lumen of the intestine, or obstruction due to extrinsic causes. I bank on all this being intus-

susception due to a preexisting benign tumor. Whether we will find gangrene of the bowel, I cannot say; but my impression would be that we will not.

Dr. Walter E. Garrey: This case presents a number of very interesting decisions, the most important of which Dr. Taylor put his finger on when he said we had to decide whether the blood supply was impaired or not. Dr. Taylor wondered where she was during the interval after the fall, when she was vomiting. She was visiting various clinics. First the orthopedic and then the neurologic and medical for vomiting, and eventually she found her way to the Accident Room, where, in reviewing the record, it seemed to the men who admitted her that it represented neurotic vomiting, but they were suspicious enough to keep her in the hospital. The next morning when I saw her for the first time the abdomen was distended and auscultation showed rushing, gurgling peristalsis. It was then that the second plain abdominal film showed gas in the right colon and transverse colon. We then promptly had a barium enema which Dr. Schatzki and Dr. Petersen diagnosed as intussuscepted tumor with obstruction. We operated on her that same afternoon. Under spinal anesthesia we made a small right lower quadrant incision and put a hand across in the area of the splenic flexure, where a cuff-like fold was felt which we thought was intussusception; and below that, in the upper descending colon, was felt a walnut-sized tumor. We thought we were dealing with an intussuscepted tumor. The decision had to be made whether we should merely alleviate the obstruction by cecostomy—the right colon was edematous and there was some fluid in the abdomen—or whether because of fear of impaired blood supply to the intussusception we should go farther and attempt reduction and be prepared to do a resection in the presence of an acute obstruction, a procedure which would necessitate considerable risk. We decided that the blood supply was not impaired and the safest thing to do was a cecostomy. Ten days later we operated and found an area of descending colon and splenic flexure entirely free from pathology on first inspection. However, just to the left of the midline was a little frosting on the serous surface of the transverse colon, evidence of trauma to the visceral peritoneum at that point. Within the bowel, in the middle of that area, a dome-shaped tumor could be palpated, the base of which was the size of a twenty-five cent piece, arising from the anterior wall and not nearly completely obstructing the lumen of the bowel at that time. There was no intussusception at that time. We felt it was a broad based adenomatous polyp, at least potentially malignant, and therefore, and because of previous trouble with intussusception, that it ought to be removed. We did a resection and an aseptic end-to-end anastomosis by the Parker-Kerr method, following which she did very well.

Preoperative Diagnoses

Acute obstruction of the colon.
Carcinoma of the left colon.

Dr. Grantley W. Taylor's Diagnosis

Pedunculated benign tumor of the colon producing intussusception.

Pathologic Diagnoses

Submucous lipoma.
(Intussusception.)
Melanosis coli.

Pathologic Discussion

Dr. Mallory: By the time of resection the intussusception, as you have heard, had reduced itself but the mucosa of the bowel was still reddish black, so that we may assume there had been a considerable degree of circulatory obstruction, though not enough to produce gangrene. The cause of the intussusception was, as predicted, a benign tumor, in this instance a lipoma arising in the submucosa of the intestinal wall. In retrospect I think it is probable that her difficulties over the entire twenty-year period were probably all dependent upon the tumor which is undoubtedly slowly growing and must have been present over a long period of time.

Dr. Taylor: I meant to speak of the injury as possibly producing the intussusception. I do not know enough about it to decide whether that is a reasonable assumption, but a fall such as she suffered might have caused the violent prolapse or motion of that tumor to start intussusception. However, there was an interval of two days between the fall and the onset of the symptoms.

Dr. Garrey: I should also have said we very carefully palpated the remainder of the colon and found no polyps. We palpated the gallbladder and found no gallstones.

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KEEPING "PROFESSIONALLY FIT"

A DIPLOMA from a medical school and registration by a state licensing board are together no absolute guarantee that a physician will conduct his practice of medicine in a way that is most advantageous to his patients, to the community as a whole and to himself. While it is true that the physician learns a great deal about diagnosis and therapy through the routine of practice, the present rate of advance of medical knowledge is so rapid that it becomes impossible for him, as years go by, to apply correctly a great part of the knowledge acquired during his medical school years. His position is analogous to that of one endowed by nature with a superb physique, the finer points of which will rapidly disappear unless successful attempts are made to keep "physically fit". The physician, likewise, must make an effort to keep abreast of the times—to keep "professionally fit".

To those who are fortunate enough to be on the faculties of medical schools and on the staffs of moderately sized or large hospitals, the problem is relatively simple. Teaching activities, staff meetings, consultations and the like all demand, and frequently furnish, the newer medical facts. But the physician without such associations lacks the stimulation required by teaching and the instruction gained by contact. Unless intelligent, diligent and honest efforts are made to master the more important current contributions to medical science, he gradually falls behind and becomes "professionally unfit".

How can the busy practitioner best retain "professional fitness"? Enrollment in regular postgraduate courses of instruction is too time-consuming and costly for the majority. Extension courses, such as those sponsored by the Massachusetts Medical Society, are excellent, but are naturally very limited in the amount of ground that can be covered. Medical books, particularly the so-called "systems", are satisfactory, if kept up-to-date by new editions or supplements, but expensive. Medical journals and district and state medical society meetings are the agencies on which the physician is most dependent. Unfortunately, such articles and addresses are too frequently of little value to the practicing physician. He should be interested neither in the reports of progress in experimental and research medicine nor in the therapeutic results of new, but relatively untried, therapeutic agents, however brilliant they may be. What he needs and should demand are authoritative papers and talks in which the known facts concerning the etiology and course of disease and the tried and approved methods of treatment are simply and clearly reviewed. Literature released by the Massachusetts Department of Public Health, such as that concerning the Massachusetts Cancer Program, is of inestimable value, but narrow in scope.

Assuming that extension courses are available, that up-to-date books are at hand, that the contents of articles and talks are proper and that appropriate literature is furnished by an active state health agency, no alibi for "professional unfitness" remains. While it is true that these facilities are not available to all and that many opportunities are presented that are of little value to the practicing physician, the means of keeping "professionally fit", in one form or another, is within the reach of all and failure to seize the opportunity is evidence of an inexcusable lack of responsibility on the part of the physician.

At present such "professional fitness" is a purely personal matter, but at some future date it may be demanded by a public that is becoming more and more educated in medical matters. It is true that a large proportion of those who eventually allow themselves to become "professionally unfit" could and should be eliminated by stricter regulations regarding approved medical schools and by more exacting examina-

tions by state licensing boards, particularly in regard to the individual traits and characteristics that are essential to the conscientious practice of medicine. Nevertheless, it does not seem unreasonable to postulate that, in the future, re-examination at stated intervals, such as that required of the doctors of the United States Army and Navy and that recommended for the members of at least one of the recently organized "specialty" medical associations, may be suggested.

THE BRATTLEBORO RETREAT

SHORTLY after 1800, the Honorable Richard Whitney of Brattleboro, Vermont, began to show symptoms of mental disease. He was treated by being held under water for a number of minutes until he was almost suffocated, with the hope that such a profound shock to his nervous system would cure him of his malady. Needless to say, a cure was not effected by this drastic procedure and the patient had to be closely confined until death released him, in 1806, from his suffering. The illness of this well-known patient brought to the mind of Mrs. Anna Marsh, the widow of Dr. Perley Marsh of Hinsdale, New Hampshire, the necessity for suitable accommodations for the care of the insane. She, therefore, in drawing her will in 1834, left a considerable sum of money to found a hospital for this purpose. Thus, one hundred years ago, were the beginnings of the Brattleboro Retreat at Brattleboro, Vermont. At the time it was founded there were only ten hospitals in this country for the care of patients with mental disease. Three of these were in New England: the McLean Hospital, then at Somerville but now in Waverley, Massachusetts; the Hartford Retreat in Hartford, Connecticut; and a hospital in Worcester. The move on the part of Mrs. Marsh was a natural one, tempered to the times. Only a decade or so before her time, the care of the insane was in large part conducted by those not in the medical profession. The problem was considered one of theology and law and this idea still persists even to the present day.

Due to the sound example set by hospitals such as the Brattleboro Retreat, in the last one hundred years, insanity has come under the care of physicians, where it rightfully belongs. The Brattleboro Retreat has been one of the outstanding hospitals in this country, always upholding the highest standards of medical practice. It has grown from a single house with accommodations for about twenty patients to its present extensive location with beds for seven hundred patients. Four superintendents, including the present incumbent, Dr. Horace G. Ripley, with the aid of an intelligent board of trustees, have carried this institution to its high place in the medical world today. It is certainly second to none in equipment and staff. *The New England Journal of Medicine* extends its heartiest congratulations to the Brattleboro Retreat on its centennial.

SPECIFIC TREATMENT FOR LOBAR PNEUMONIA

WHETHER or not an explanation can be offered for changes in mortality rates, there is usually a group of individuals who interest themselves in the particular problems of each disease. They formerly made much of what were called "educational" factors. The spectacular drop in tuberculosis mortality rates has become indelibly associated in the minds of the public with a vague biologic integrity which is somehow predicated by sleeping with the windows open and a daily movement of the bowels. We have even had a President who fought his way to health by deep breathing exercises! That was before the days of collapse therapy.

The Pneumonia Committee of the Boston Health League, a communication from whom appears on page 890, does not permit itself the luxury of explaining a drop of approximately fifty per cent in the pneumonia death rates in Massachusetts during the past fifteen years. The members of this committee know it would be a mistaken assumption to explain this change in terms either of prevention or treatment, although both the case rate and the fatality rate have been reduced. They have been content to point out from time to time the available resources for physicians in giving the best possible treatment to pneumonia patients in the City of Boston. A continuation of this service is to be hoped for.

CHURCH SERVICE FOR PHYSICIANS

APPROPRIATELY on the evening of Saint Luke's day, Sunday, October 18, a special service for physicians and medical students was held in the Cathedral Church of Saint Paul in Boston under the auspices of a committee of twenty physicians, headed by Dr. J. Howard Means as Chairman. The church was well filled, and among the congregation might be recognized many well-known physicians of the city. The lessons of the day were from Ecclesiasticus, xxxviii, — "Honor a physician with the honor due unto him";—and from the parable of the Good Samaritan in Saint Luke's Gospel.

Bishop Sherrill gave an address of welcome in which he emphasized the close affiliation which exists between the two professions of ministry, between the clergy and the physicians.

The principal address was by Dr. J. M. T. Finney of Baltimore. Dr. Finney pointed out that physicians should treat their patients both

body and soul, since they need often to render them spiritual as well as physical aid. Religion and medicine are complementary forces for good and the physician should not be content merely to combat the diseases of the body. It is his duty to share in the universal conflict between the forces of organized good and organized evil. His should be the human touch which makes the whole world kin. "A kindly word spoken in season by the understanding physician will frequently bring more relief to a distressed mind or body than a pill or potion, the knife, or an elaborate psycho-analysis." From the days of Sir Thomas Browne it has been realized by the thoughtful that physicians, as a profession, are not irreligious, that science and religion are not incompatible, in spite of popular impression to the contrary. As examples of firm religious conviction among physicians and other men of science, Dr. Finney cited Sir Isaac Newton, Lord Kelvin, Louis Pasteur, Sir William Osler, and Dr. Oliver Wendell Holmes. He might have added also Holmes's successor, Dr. Thomas Dwight, from whom many of the older physicians of our community learned not only the anatomy of the human body but the dignity of the human soul.

It is gratifying that so large a number of practitioners and students of medicine attended this service not only as an evidence of respect to Dr. Finney but as testimony to their conviction of the truth of the doctrine which he presents. The physician need not fear to be religious, and should possess the moral courage to testify, profess, and practice the faith which is in him.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

LANE, C. GUY. A.B., M.D. Harvard University Medical School 1908. Lecturer in Dermatology, Harvard University Medical School. Chief, Dermatological Department, Massachusetts General Hospital. Consultant in Dermatology, Huntington Memorial Hospital; New England Deaconess Hospital and United States Veterans' Hospital. His subject is "Occupational Skin Disease—A Preventable Disease and a Challenge to Modern Preventive Medicine." Page 859. Address: 416 Marlborough Street, Boston, Mass.

BLOTNER, HARRY. A.M., M.D. Tufts College Medical School 1924. Associate in Medicine, Peter Bent Brigham Hospital. Instructor in Medicine, Harvard University Medical School. Consultant to the Haverhill Municipal Hospitals and the Weymouth Hospital. His subject is "The Effect of Protamine Insulinate on the Blood Sugar Level Including Intravenous Use in Rabbits." Page 865. Address: 23 Bay State Road, Boston, Mass.

DUBOIS, EOLINE CHURCH. M.D. Tufts College Medical School 1903. Member of Springfield Health Council. School Physician, Springfield. Associate Physician, Wesson Hospital, Springfield. His subject is "Living With a Colostomy." Page 869. Address: 174 Buckingham Street, Springfield, Mass.

HOWE, BYRON E. M.D. University and Bellevue Hospital Medical College 1918. F.A.C.S. Chief of Surgical Staff, W. B. Plunkett Memorial Hospital, Adams, Mass. Member of Courtesy Surgical Staff, North Adams Hospital, North Adams, Mass. His subject is "Report of a Case of Gas Bacillus Infection Occurring in a Wound Following an Operation for Chronic Appendicitis." Page 871. Address: 6 Center Street, Adams, Mass.

The Massachusetts Medical Society

FOURTH ANNUAL POSTGRADUATE MEDICAL EXTENSION COURSE

The following sessions have been arranged by the Committee for the week beginning November 9:

Barnstable

Sunday, November 15, at 4:00 p. m., at the Cape Cod Hospital, Hyannis. Subject: The Prognosis of Heart Disease. Instructor: R. S. Palmer. John I. B. Vail, Chairman.

Berkshire

Thursday, November 12, at 4:30 p. m., at the House of Mercy Hospital, Pittsfield. Subject: Acute Abdominal Emergencies. Instructor: R. R. Linton. Melvin H. Walker, Jr., Chairman.

Bristol North

Thursday, November 12, at 4:00 p. m., at the Morton Hospital, Taunton. Subject: Anesthesia: (a) Drugs in Anesthesia. (b) General Care of Patient in Anesthesia. Instructor: P. D. Woodbridge. Arthur R. Crandell, Chairman.

Bristol South (Fall River Section)

Monday, November 9, at 4:00 p. m., at the Stevens Clinic of the Union Hospital, Fall River. Subject: Heart Disease: Treatment of Cardiovascular Emergencies. Instructor: R. E. Glendy. Howard P. Sawyer, Co-Chairman.

Bristol South (New Bedford Section)

Friday, November 13, at 4:00 p. m., at St. Luke's Hospital, New Bedford. Subject: Heart Disease: Treatment of Cardiovascular Emergencies. Instructor: Sylvester McGinn. Robert H. Goodwin, Co-Chairman.

Essex South

Tuesday, November 10, at 4:00 p. m., at the Salem Hospital, Salem. Subject: Blood Diseases: Diseases Affecting the White Blood Cells. Leukemias; Agranulocytosis; Mononucleosis. Instructor: G. S. FitzHugh. Walter G. Phippen, Chairman.

Franklin

(Course omitted this week on account of Armistice Day.)

Hampden

Thursday, November 12, at 4:00 p. m., at the Academy of Medicine, Professional Building, 20 Maple Street, Springfield, and at 8:30 p. m., in the Outpatient Department of the Skinner Clinic, Holyoke Hospital, Holyoke. Subject: General Consideration of Newer Aspects of Obstetrics and Pediatrics from the Viewpoint of the General Practitioner. Instructors: M. V. Kappius and S. H. Clifford. George L. Schadt and George D. Henderson, Chairmen.

Hampshire

(Course omitted this week on account of Armistice Day.)

Middlesex East

Tuesday, November 10, at 4:00 p. m., at the Melrose Hospital, Melrose. Subject: Blood Diseases: Diseases Affecting the White Blood Cells. Leukemias; Agranulocytosis; Mononucleosis. Instructor: C. S. Keefer. Joseph H. Fay, Chairman.

Middlesex North

Friday, November 13, at 7:00 p. m., at St. Joseph Hospital, Merrimack Street, Lowell. Subject: Heart Disease: Treatment of Cardiovascular Emergencies. Instructor: S. A. Levine. Samuel A. Dibbins, Chairman.

Middlesex South

Tuesday, November 10, at 4:00 p. m., at the Cambridge Municipal Hospital, Cambridge. Subject: Heart Disease: Treatment of Cardiovascular Emergencies. Instructor: H. B. Sprague. Edmund H. Robbins, Chairman.

Norfolk

Friday, November 13, at 8:30 p. m., at the Norwood Hospital, Norwood. Subject: Blood Diseases: Diseases Affecting the White Blood Cells. Leukemias; Agranulocytosis; Mononucleosis. Instructor: W. B. Castle. Hugo B. C. Riemer, Chairman.

Norfolk South

Monday, November 9, at 8:30 p. m., at the Quincy City Hospital, Quincy. Subject: Arthritis: Diagnosis and Treatment. Instructor: H. A. Nissen. David L. Belding, Chairman.

Plymouth

Tuesday, November 10, at 4:00 p. m., at the Brockton Hospital, Brockton. Subject: Lung Disease: Pneumonia and Its Complications. Diagnosis and Treatment. Instructor: Roderick Heffron. W. H. Pulsifer, Chairman.

Worcester (Milford Section)

Thursday, November 12, at 8:30 p. m., in the Nurses' Home of the Milford Hospital, Milford. Subject: Blood Diseases: The Hemoglobin and Red Blood Cells in Relation to Disease. Instructor: W. P. Murphy. Joseph Ashkins, Sub-Chairman.

Worcester North

Friday, November 13, at 4:30 p. m., at the Burbank Hospital, Fitchburg. Subject: Psychiatry: (a) Psychobiology in General Medicine. (b) The Common Neuroses. Instructor: H. C. Solomon. Edward A. Adams, Chairman.

MISCELLANY

SPECIFIC TREATMENT FOR LOBAR PNEUMONIA

As the season of increased prevalence of lobar pneumonia approaches, it seems desirable again to call attention to certain matters pertaining to the disease, the importance of the recognition of types of pneumococcus infection and the application of specific treatment.

Lobar pneumonia is the seventh leading cause of death in Massachusetts. Type I or Type II pneumococci are the cause of the disease in over one-half of the cases.

The case fatality rate of Type I pneumococcus pneumonia untreated with serum is approximately 25 per cent and of Type II, 41 per cent. The expected death rate in these two types can be much reduced by early specific treatment. Of 645 Type I cases in the Massachusetts Pneumonia Study, which were treated with serum within the first four days of the illness, only 73 or 11.3 per cent died. Of 167 Type II cases similarly treated, 39 or 23.4 per cent died. This experience in Massachusetts has demonstrated that specific treatment can be successfully used by physicians in general practice.

Success in specific treatment depends for the most part upon the early use of serum. Thus the type of pneumococcus infection should be determined at the earliest possible moment. The importance of the time element is emphasized by the experience in Massachusetts. Of 506 Type I cases treated during the first three days, 46 died (9.1 per cent) and of 139 treated on the fourth day, 27 died (19.4 per cent).

Determination of Type of Pneumococcus Infection

The type of infection is more readily determined by examination of the sputum than by other means. The specimen should come from the lung with as little admixture of saliva as possible. It is desirable

to obtain at least a teaspoonful of sputum, which is collected in a clean wide-mouthed bottle or cardboard sputum box, and to send it at once, preferably by messenger, to the nearest laboratory equipped for typing. Special containers are available through local boards of health. No antiseptic should be added to the sputum. Tuberculosis sputum outfits should not be used as they contain carbolic acid.

The Neufeld method of typing is rapid, simple and reliable and has supplanted other methods. It is applicable to pneumococci from any source and often permits identification of type within a few minutes.

Typing will be done without charge at the State Bacteriological Laboratory, Room 527, State House, Boston. In case of emergency, typing of sputum from patients for whom serum therapy is applicable will be done during the night, week-ends, or on holidays. Such specimens should be left with the State House Guard. All sputums showing Type I or Type II pneumococci are reported by telephone or telegraph, prepaid.

In addition to the State House Laboratory, typing facilities are available elsewhere. The charges for the typing depend on the laboratory. Typing in Boston is done at the following hospitals: Boston City, Faulkner, Evans Department of the Massachusetts Memorial, and the New England Deaconess.

Elsewhere in the State facilities have been established for pneumococcus typing in 59 laboratories, i.e.:

Attleboro, Sturdy Memorial Hospital
Ayer, Ayer Community Memorial Hospital
Beverly, Beverly Hospital
Brockton, Board of Health Laboratory
Brockton, Brockton Hospital
Cambridge, Cambridge Hospital
Cambridge, Cambridge City Hospital
Chelsea, Chelsea Memorial Hospital
Clinton, Clinton Hospital
Everett, Whidden Memorial Hospital
Fall River, Fall River General Hospital
Fall River, St. Ann's Hospital
Fall River, Truesdale Hospital
Fall River, Union Hospital
Fitchburg, Burbank Hospital
Framingham, Framingham Union Hospital
Gardner, Henry Heywood Memorial Hospital
Gloucester, Addison Gilbert Hospital
Great Barrington, Fairview Hospital
Greenfield, Franklin County Hospital
Haverhill, Gale Hospital
Holyoke, Holyoke Hospital
Holyoke, Providence Hospital
Hyannis, Cape Cod Hospital
Lawrence, Lawrence General Hospital
Leominster, Leominster Hospital
Lowell, Lowell General Hospital
Lowell, St. John's Hospital
Lowell, St. Joseph's Hospital
Lynn, Lynn Hospital
Malden, Malden Hospital
Marlboro, Marlboro Hospital
Milford, Milford Hospital
Natick, Leonard Morse Hospital
New Bedford, St. Luke's Hospital
Newburyport, Anna Jaques Hospital
Newton, Newton Hospital
North Adams, North Adams Hospital
Northampton, Cooley Dickinson Hospital
Norwood, Norwood Hospital
Palmer, Wing Memorial Hospital
Peabody, J. B. Thomas Hospital
Pittsfield, House of Mercy Hospital
Pittsfield, St. Luke's Hospital
Plymouth, Jordan Hospital
Pocasset, Barnstable County Hospital
Quincy, Quincy City Hospital
Salem, Salem Hospital
Southbridge, Harrington Memorial Hospital
Springfield, Springfield Hospital
Springfield, Mercy Hospital
Springfield, Wesson Hospital
Taunton, Morton Hospital
Ware, Mary Lane Hospital
Westfield, Noble Hospital
Worcester, St. Vincent's Hospital
Worcester, Worcester City Hospital
Worcester, Worcester Hahnemann Hospital
Worcester, Worcester Memorial Hospital.

Specific Serum for Treatment

Specific serum for the treatment of Type I or II pneumococcus pneumonia is available to physicians through the State Laboratory, Room 527, State House, Boston, or through the laboratories of any of the hospitals listed above, provided that:

(1) Sputum or other material from the patient is first typed and found to contain Type I or II pneumococci.

(2) The physician certifies that the patient has not been ill longer than four days (96 hours).

(3) As soon as the patient is discharged, the physician agrees to make a report to the Massachusetts Department of Public Health on a form enclosed with the serum.

Under these conditions 60,000 units of concentrated serum (Felton's antibody solution) will be issued for each Type I pneumonia and 100,000 units for each Type II case.

Bacteriemia occurs in about one-quarter of the cases with Type I and one-third of those with Type II pneumococcus pneumonia, and is a very serious condition. Thus information in relation to bacteriemia is of great importance in treatment. It is desirable to make a blood culture in each case before the first dose of serum is given. If the first blood culture is positive, or, if negative, and the progress of the case is unsatisfactory, it is desirable to continue to take blood cultures at intervals of about twenty-four hours. Blood cultures may be sent for examination to the State Bacteriological Laboratory.

Experience has shown that some cases require

more serum than others. An additional 60,000 units of serum may be obtained from any of the above-mentioned laboratories if any of the following conditions are present:

(1) The patient has a bacteriemia as shown by finding Type I or II pneumococci in cultures of his blood.

(2) The patient is pregnant or has been delivered within seven days of the onset of pneumonia.

(3) If the temperature does not drop below 101° F. by mouth within 18 hours of beginning treatment; or, if having dropped, it again rises above this level within 48 hours.

Further information concerning the administration of serum will be found in the circular accompanying the serum. The directions given in the circular should be followed in detail.

NURSING SERVICE FOR PNEUMONIA

Clinical experience has shown that patients receiving prompt medical and nursing care have the best chances of recovery. In almost every part of the State nursing service on a visit basis is available through the visiting nursing associations for patients not needing or who cannot afford a special nurse. In Boston the Community Health Association will give nursing care on a visit basis on the order of a physician. This Association will be glad to cooperate with physicians by sending a specimen of sputum for typing.

PNEUMONIA COMMITTEE,
BOSTON HEALTH LEAGUE,
Dr. Frederick T. Lord, Chairman,
Miss Dorothy Carter,
Dr. Henry D. Chadwick,
Dr. Frank Cruickshank,
Dr. Roderick Heffron,
Dr. Dwight O'Hara,
Dr. Wilson G. Smillie,
Miss Margaret H. Tracy, Secretary.

FACULTY APPOINTMENTS IN HARVARD UNIVERSITY

Twenty-three new faculty members in Harvard University have been appointed for the present academic year.

Four are at the Harvard Dental School: Leslie M. Ohmart, of Medford, Mass., as Instructor in Pharmacology; Carl T. Leander, of Jamaica Plain, Mass., as Assistant in Prosthetic Dentistry; John A. Tarule, of Nashua, N. H., as Assistant in Prosthetic Dentistry, and William L. Wilson, of Everett, Mass., as Assistant in Orthodontia.

Seventeen are at the Harvard Medical School: Floyd C. Turner, of Newton, Mass., M.D. Chicago College of Medicine and Surgery '16, as Instructor in Preventive Medicine and Hygiene; Frederick W. Barnes, Jr., A.B. Yale '30, M.D. Johns Hopkins '34, Assistant in Pediatrics; Warren E. Wheeler, S.B. Mt. Union College '29, M.D. Harvard '33, Assistant in Pediatrics; John M. Wise, of Lexington, Mass., M.D. University of Buffalo '07, Assistant in Medicine; Benjamin Kropp, of Roxbury, Mass., S.B. Harvard '23, A.M. '24, Ph.D. '27, Research Fellow in Anatomy; Hsien-i Chu, M.D. Peiping Union Medical College '30, Research Fellow in Biological Chemistry; Jeanne F. Manery, of Boston, Mass., A.B. University of Toronto '32, A.M. '33, Ph.D. '35, Research Fellow in Biological Chemistry; Jytte M. Muus, M.S. University of Copenhagen '30, Research Fellow in Biological Chemistry; Mildred G. Gray, of Somerville, Mass., S.B. Boston University '28, A.M. '33, Research Fellow in Neurology; Louis M. Hellman, of Boston, Mass., Ph.B. Yale '30, M.D. Johns Hopkins '34, Research Fellow in Pathology; Daniel Bargeton, of Paris, M.D. University of Paris '36, Research Fellow in Physiology; Julien P. F. Maes, M.D. University of Brussels, Belgium, '35, Research Fellow in Physiology; Fiorindo A. Simeone, of Boston, Mass., A.B. Brown University '29, A.M. '30, M.D. Harvard '34, Research Fellow in Physiology; Harold C. Wiggers, of Boston, Mass., A.B. Wesleyan '32, Ph.D. Western Reserve '36, Research Fellow in Physiology; Neil T. McDermott, of Cleveland, Ohio, A.B. Catholic University, Washington, D. C., '28, M.D. Harvard '32, Research Fellow in Psychiatry; Benjamin V. White, Jr., of Summit, N. J., A.B. Princeton '30, M.D. Harvard '34, Research Fellow in Psychiatry, and Rudolph V. Naumann, of Brookline, Mass., S.B. Northwestern '33, Teaching Fellow in Physiology.

Two are members of the Harvard Department of Hygiene: Ray L. Whitney, of Waverley, Mass., Ph.B. Brown University '00, M.D. Harvard '04, Assistant Medical Adviser, and Jackson Flanders, of Melrose, Mass., B.S. Harvard '24, M.D. '29, Assistant Surgical Adviser.

SAMUEL H. EPSTEIN, M.D., IS NOW WORKING IN LONDON

The first annual meeting of the British Branch of the International League Against Epilepsy was held in London, England, on October 16, 1936, and was attended by Dr. Samuel H. Epstein of Boston, a member of the American Branch of the League. Dr. Epstein is on leave of absence from the Boston Psychopathic Hospital and is this year engaged in neurological work at the National Hospital, Queen Square, in London.

A NATIONAL CONFERENCE ON EDUCATIONAL BROADCASTING

Invitations have been sent to various persons to attend the First National Conference on Educational Broadcasting, which will be held in Washington, D. C., at the Mayflower Hotel, on December 10, 11, and 12, 1936. Eighteen organizations interested in every important phase of American education are sponsoring the conference, in cooperation with the United States Office of Education and the Federal Communications Commission.

The purpose of the meeting is to enable the large number of persons who are interested in educational

broadcasting to discuss means by which radio may become a more effective instrument for education, both formal and informal; to serve as a clearing house for information on the latest technical and professional developments in educational broadcasting; and to enable persons representing all phases of the subject to become acquainted and to exchange ideas and experiences.

AN ADDRESS BY DR. GEORGE R. MINOT

On Thursday, November 19, 1936, at 8:30 p. m., in the Auditorium of the Hospital for Joint Diseases, Madison Avenue at 123rd Street, New York City, Dr. George R. Minot will deliver an address entitled "Anemia: Etiology, Diagnosis and Treatment."

This is the Walter M. Brickner Lecture.

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS FOR SEPTEMBER, 1936

Disease	Sept., 1936	Sept., 1935	5 Yr. Average*
Anterior Poliomyelitis	8	536	246
Chickenpox	75	99	85
Diphtheria	28	18	66
Dog Bite	862	793	577
Epidemic Cerebrospinal Meningitis	4	7	5
German Measles	32	46	28
Gonorrhea	571	553	593
Lobar Pneumonia	152	105	90
Measles	106	51	73
Mumps	180	217	124
Scarlet Fever	188	218	300
Syphilis	463	462	364
Tuberculosis, Pulmonary	203	257	280
Tuberculosis, Other Forms	30	31	38
Typhoid Fever	19	12	22
Undulant Fever	5	3	1
Whooping Cough	569	254	422

*Based on figures for preceding five years.

RARE DISEASES

Anterior poliomyelitis was reported from Billerica, 1; Boston, 1; New Bedford, 1; Northampton, 1; North Andover, 1; Reading, 1; Watertown, 1; Weymouth, 1; total, 8.

Diphtheria was reported from Beverly, 1; Boston, 3; Chelmsford, 1; Chelsea, 1; Lowell, 7; Lynn, 1; New Bedford, 8; North Adams, 1; Worcester, 5; total, 28.

Dysentery, bacillary, was reported from Boston, 1.

Encephalitis lethargica was reported from Hudson, 1; Swampscott, 1; total, 2.

Epidemic cerebrospinal meningitis was reported from Boston, 1; Everett, 1; Gardner, 1; Worcester, 1; total, 4.

Malaria was reported from Brookline, 1; Natick, 1; Salem, 1; total, 3.

Pellagra was reported from Lynn, 1.

Septic sore throat was reported from Abington, 1; Boston, 1; Lowell, 1; total, 3.

Tetanus was reported from Hudson, 1; Nantucket, 1; Springfield, 2; total, 4.

Trachoma was reported from Boston, 1; Malden, 1; Marlboro, 1; Westfield, 1; total, 4.

Trichinosis was reported from Attleboro, 1; Boston, 1; Brockton, 1; total, 3.

Typhoid fever was reported from Amesbury, 1; Ashburnham, 1; Attleboro, 3; Boston, 1; Brookline, 1; Dartmouth, 2; Essex, 1; Hopkinton, 1; Lowell, 1; Lynn, 2; Melrose, 1; New Bedford, 1; Newburyport, 1; Shirley, 1; Somerset, 1; total, 19.

Undulant fever was reported from Attleboro, 1; Dalton, 1; Norton, 1; Pittsfield, 2; total, 5.

Undulant fever is being reported fifty-seven per cent above last year's record high figure.

Both for September and this year to date, lobar pneumonia continues higher than the five-year average.

Anterior poliomyelitis had the lowest September incidence ever reported, except for 1934, which it equaled. The total cases to date are lower than any recorded year except 1919, at which time poliomyelitis was rarely diagnosed unless paralysis occurred.

The reported incidence of epidemic cerebrospinal meningitis continues to be close to the five-year average after an unusually high incidence ending in July.

The September incidence of diphtheria was lower than all previous years, except 1935. Diphtheria incidence to date is slightly below last year's record low figure.

Pulmonary tuberculosis had the lowest September incidence on record.

The September incidence of scarlet fever was lower than all previous years, except 1918.

Measles, mumps, whooping cough, and dog bites were reported above the five-year average.

The reported incidence of chickenpox, German measles, tuberculosis (other forms), and typhoid fever was not remarkable.

CORRESPONDENCE

TALE OF THE IGOROT AND THE AMOEBA

Mr. Editor:

The following quotation is from "An American Doctor's Odyssey," by Victor Heiser, M.D., published by W. W. Norton, Inc., New York, 1936:

Dr. Heiser was trying to instill a knowledge of sanitation among the Filipinos, particularly with regard to dysentery.

"Among the wild tribes, who had the best opportunity to disseminate infection, there existed dense ignorance in regard to the nature of bacterial cleanliness. To them a germ was a bug, something that could be seen and dealt with by means of a bolo. The difficulty of explaining to a primitive race the nature of microbes and their wicked doings was excellently illustrated by the endeavor of Winfred T.

Dennison, Secretary of the Interior under Harrison, to teach the Igorots about the amoeba.

"Mr. Dennison was a little man, and therefore not so much admired in the Mountain Province as his predecessor, the gigantic Worcester. He was convinced that he could turn the Igorots' belief in evil spirits to good account, and asked that a motile amoeba be mounted for him on a microscopic slide. A lusty specimen was accordingly provided.

"We went on the annual tour of the Mountain Province, and at one of the chief towns of the Igorots, Mr. Dennison decided to give his demonstration. He had one of the chiefs brought over and said to him, 'I want to show you an evil spirit that causes diseases. The white man can control him. If you look through this you will see him.'

"'The *Apo* looked as directed and grunted. 'What do you see?' No reply could be elicited. Mr. Dennison then handed the *Apo* a pencil and paper, and said, 'Draw what you see.' The *Apo* produced a very good likeness of an amoeba jumping about. Mr. Dennison then triumphantly exclaimed, 'That's what causes diseases that kill you, but we can kill it.' 'You say that little thing can kill a man?' queried the *Apo* incredulously. 'Yes,' came Mr. Dennison's confident reply. 'Well, it might kill a little white man like you, but it wouldn't hurt a great big *Apo* like me.'"

Yours truly,
WM. PEARCE COUES, M.D.

October 28, 1936.

GENITOINFECTIOUS DISEASES

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
State House, Boston

October 26, 1936.

Editor, *New England Journal of Medicine*,

That Word "Venereal"* and The Genitoinfectious Diseases†.

New International Dictionary, Webster.

1. Venereal: of or pertaining to venery, or sexual love; relating to sexual intercourse; inclined to be lascivious.
2. Venery: Sexual intercourse, coition; also, pursuit of sexual delight.

New Standard Dictionary of the English Language, Funk and Wagnalls.

1. Venereal disease: any disease communicated by sexual intercourse with an infected person.
2. Venerean: devoted to the service of Venus, or to sexual intercourse; wanton, lascivious.
3. Venerous: lascivious.
4. Venery: sexual indulgence, especially when excessive.

It makes little difference that these terms find origin in Venus and that the arts of Venus are as applicable in marriage as out of it. It remains a fact that generations of popular usage have given to them the narrower meanings which they now unquestionably bear. The whole people, not the lexicographer, have prescribed their definition. The popular understanding is deeply rooted that anything venereal or related to venery is lascivious or the result of sexual excess. Neither the term "venery" nor any of its derivatives can now be applied to normal, moral sexual intercourse as consummated between husband and wife.

Those who would deodorize the term "venereal disease" (which is only one among several of common origin) by teaching that this one term does not always means what it says, will discover that the public will not perform difficult and intricate feats in mental gymnastics. It was easier to discard the term "consumption" and to teach the public to say "tuberculosis" than it would have been to convince people that consumption as applied to tuberculosis does not have to mean what it says.

As a matter of fact, generations of usage have served to make the term "venereal disease" so synonymous with lasciviousness and prostitution that a prudish desire to be less obvious has led to the coinage of a nicer (?) substitute, "social disease". Thus the sordid connotation is made still more obvious by the deliberate effort to get farther away from it and is transferred to the otherwise respectable word "social".

Congenital infections account for perhaps ten per cent of all syphilis. Extragenital infections account for another five per cent. Is it to be implied that babies born with syphilis and the accidentally infected have acquired their infections through sexual intercourse at all, or through venery which, by definition, is lascivious sexual behavior? Married women, infected with gonorrhea or syphilis by their husbands, are more numerous than their promiscuously infected sisters. They have every legal and moral right to sexual intercourse with their husbands, and they deserve more understanding sympathy than may be expressed by stigmatizing them as venereally diseased. Gonococcal vulvovaginitis in young girls is usually innocent. Gonococcal ophthalmia neonatorum is neither a venereal disease nor is it acquired by the baby through sexual intercourse. Infections acquired at birth or accidentally or through normal, decent, moral sexual intercourse may be numbered, not in the hundreds of thousands, but in millions. These are not venereal diseases.

People can be taught that gonorrhea and syphilis are communicable diseases and as such are respecters of neither persons nor morals. They cannot be taught to understand that anyone who behaves can have a venereal disease because by usage and by definition anything venereal has its origin in sexual wantonness. People think of gonorrhea and syphilis as just rewards of those who will consort with prostitutes because gonorrhea and syphilis have always been called venereal diseases.

Unprejudiced public approval and generous public support of a program for the control of these diseases will not be forthcoming until the public learns that these are not venereal, but communicable diseases

*Nelson, N. A.: That Word "Venereal". Editorial. Am. J. Syph. Gonor. & Ven. Dis. **20**:1 (Jan.) 1936.

†Nelson, N. A.: Genitoinfectious Diseases. Editorial. Am. J. Syph. Gonor. & Ven. Dis. **20**:4 (July) 1936.

which may be acquired by the innocent, the decent, the married woman and the married man, no matter how moral their sex behavior may have been. Until then the cellars and subcellars will be "good enough" to house many a sorry "venereal disease" clinic, half the medical fraternity will refuse to treat or acknowledge that they treat, or learn how properly to treat "those dirty diseases", and there will still be all too evident the almost brutal lack of sympathy for those who are infected.

The major obstacle to public education is the unfortunate point of view, reflected by and perpetuated by our terminology, shared alike by physicians, educators, editors, the clergy, the health worker and, too, many others who should know better. Those of us who do know better will be in no position to change that point of view so long as we stand side by side with the uninformed in the mire of "venereal disease".

Some physicians and health officers seem to be of the opinion that terminology makes no difference. Can it be possible that they prefer "pesthouse" to communicable disease hospital, "insane asylum" to mental disease hospital, and "consumption" to tuberculosis! The majority, however, insist that although the term venereal disease is objectionable, it is the only available collective term which may be applied to gonorrhea, syphilis, chancroid, granuloma inguinale, lymphogranuloma inguinale (now venerea!), and a number of other epidemiologically related diseases.

Conceding that collective terminology has its usefulness, we propose that the so-called "venereal diseases" be known hereafter as the "genitoinfectious diseases". The following arguments are advanced in support of this new terminology:

1. It implies nothing as to the *conduct* of the infected.
2. It does define the usual anatomic location of the dangerous lesion and classifies the disease as infectious.
3. It may be applied correctly and *without unfair implication*, to any communicable disease acquired through sexual intercourse, whether innocently or otherwise.
4. It may be applied to congenital syphilis since that form of the disease is acquired by the fetus in the mother's uterus, which is one of the internal genitalia.
5. Gonococcal ophthalmia neonatorum may be called genitoinfectious disease because the infection occurs during the infant's migration through the mother's birth canal. Other gonoccocal eye infections usually result from the transfer of infectious material from the genitals to the eye.
6. Gonococcal vulvovaginitis (and those vulvovaginal infections caused by the micrococcus catarrhalis, and so forth) is a genitoinfectious disease.
7. The only exceptions are the very rare eye to eye infections with the gonococcus and those infections with syphilis or with other diseases in the group which are caused by extragenital contact with extragenital lesions or by transfusion. Even in these, the subsequent communicability depends, in large measure, upon the development of genital lesions. At any rate the occasional exception does not affect the usefulness of the term, so long as it is not slanderous.
8. The term "genitoinfectious disease" has an accepted half sister, "genitourinary disease", which is in good standing and which is rapidly becoming popular.
9. For those who find abbreviations convenient, the V. D. clinic becomes the G. I. D. clinic, or a V. D. program becomes a G. I. D. program.

It has been argued that too much time and effort will be required to popularize new terminology. Aside from the fact that it will require a great deal of confusing explanation to deodorize the term "venereal disease", which is only one among several of common origin and obnoxious connotation, it has been a constant tendency of medicine to popularize scientific terminology. Thus "inflammation of the bowels" has become appendicitis, "consumption" has become tuberculosis, "lockjaw" has become tetanus, "jail fever" or "ship fever" has become typhus fever, and "summer complaint" has been lost altogether in the reclassification of the various diarrheas. Cystitis is preferred to "inflammation of the bladder", and even "piles" are becoming "hemorrhoids"! One of these days patients will know what the doctor means who says gonorrhea instead of "clap" and syphilis is already better known than "pox", or "the old rale" is remembered. Most of these improvements in the terminology have been accomplished within the lifetimes of many of us. Who will be so bold as to insist that they have not been for the better?

The above is a liberal quotation from two editorials by Dr. N. A. Nelson of this Department. For the past six years the Department has urged that the terms "venereal disease" and "social disease" be consigned to oblivion. The medical profession and the public health workers of Massachusetts have caught the spirit of the Department's purpose and it is safe to say that nowhere else in the United States are those terms used less frequently. In Massachusetts we say "gonorrhea" and "syphilis."

It is granted that a collective term is often convenient. This Department has accepted "genitoinfectious disease" as a collective term for gonorrhea, syphilis, chancroid, and so forth, and it has been pleased to learn that widely known syphilologists, urologists and health officials in this country and in Canada have also accepted it and are using it. Three state departments of health are moving to convert their divisions of venereal diseases into divisions of genitoinfectious diseases. This Department urges the general adoption of the term throughout this State.

Yours truly,

HENRY D. CHADWICK, M.D.,
Commissioner of Public Health.

RECENT DEATHS

HUNT—Frank Hamilton Hunt, M.D., chief medical officer of the Boston Sanatorium, a branch of the Boston City Hospital, died at his home, 249 River Street, Mattapan, October 26, 1936.

Dr. Hunt was born in Richmond, Virginia, in 1876 and his premedical education was acquired at Randolph Macon College and the University of Virginia. He graduated from the medical school of the University in 1899. His internship was served at the Bellevue Hospital in New York City. Subsequently he practiced for a time in that city. In 1917 Dr. Hunt came to Boston and was appointed to the staff of the Boston Sanatorium.

He was a Fellow of the Massachusetts Medical Society, a member of the National Tuberculosis Association, the Phi Sigma fraternity, the Trudeau Society of Boston and the Harvard Club.

Dr. Hunt is survived by his widow, Mrs. Christine C. (Cummings) Hunt; two sisters, Miss Mary Hunt, of New Jersey; Mrs. K. C. Moore, of Florida, and a brother, Aubrey Hunt, of Richmond, Virginia.

CABOT—Mrs. Mary Boit Cabot, wife of Dr. Hugh Cabot of the Mayo Clinic, died in Rochester, Minnesota, October 26, 1936. Mrs. Cabot was born in New York City, the daughter of Robert Boit.

WEBSTER—George Webster, M.D., of 743 Main Street, Southbridge, Massachusetts, died October 27, 1936.

Dr. Webster was a graduate of Dartmouth College, and of the Baltimore Medical College. He had served on the Southbridge Board of Health and was school physician and a member of the staff of the Harrington Hospital.

He was a Fellow of the Massachusetts Medical Society. His widow, Mrs. Carrie (Gleason) Webster, survives him.

NOTICES

CONFERENCE OF CLINICAL PATHOLOGY

The Boston City Hospital

The monthly conference of clinical pathology will be held at the Hospital on Thursday, November 12, at 12 noon, in the Pathological Amphitheater.

Joseph E. Hallisey, M.D., *Secretary*,
Medical Staff.

MEDICAL CLINIC AT THE PETER BENT BRIGHAM HOSPITAL

At 3:30 p. m. on Thursday, November 12, in the Amphitheater of the Peter Bent Brigham Hospital, Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard Medical School and Physician-in-Chief, Peter Bent Brigham Hospital, will give a medical clinic. To it are cordially invited practitioners and medical students.

A MEDICAL HISTORICAL PAGEANT

The Boston Medical History Club will present a Medical Historical Pageant at the Boston Medical Library, John Ware Hall, November 16, 1936, at 8:00 p. m.

Pathfinders in American Medicine given by students of Tufts College Medical School. Director—Professor B. Spector.

Founding of Medical Schools

John Morgan (1735-1789)—R. E. Cole, '38.
Benjamin Rush (1745-1813)—S. W. Joel, '38.
Daniel Drake (1785-1852)—A. W. Stearns, Jr., '39.

Surgery

Philip Syng Physick (1768-1837) — D. D. Cornell, '39.
Valentine Mott (1785-1865) — J. A. McLaughlin, '39.
Joseph O'Dwyer (1841-1898)—D. Miller, '38.

Experimental Medicine

William Beaumont (1785-1853)—R. E. Moore, '37.
Alexis St. Martin—D. A. Walker, '38.

The New Humanity

Marie Elizabeth Zakrzewska (1829-1902)—Alice M. Broadhurst, '39.
Linda Richards (1840-1911) — Miriam L. Doble, '39.

Preventive Medicine

Walter Reed (1851-1902)—H. J. Young, '39.
William Crawford Gorgas (1854-1920) — D. Miller, '39.

Exhibition of manuscripts and texts of the characters portrayed in the pageant by Mr. James F. Ballard, Director of the Boston Medical Library.

Anyone interested is cordially invited to attend.

REPORTS AND NOTICES OF MEETINGS

OFFICERS OF THE AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION

At the meeting of the American Clinical and Climatological Association held in Richmond, Virginia, October 27, 1936, the following named officers were elected: President, Dr. E. James Paullin, Atlanta, Georgia; Vice-President, Dr. John B. Hawes, 2nd, Boston; Secretary-Treasurer, Dr. F. M. Rackemann, Boston; Recorder, Dr. Francis B. Trudeau, Saranac Lake, New York, and Councilor, Dr. L. Whittington Gorham of Albany, New York.

WILLIAM HARVEY SOCIETY

The first meeting of the William Harvey Society of the Tufts College Medical School for the current academic year, was held at the Beth Israel Hospital Tuesday evening, October 20, 1936, Dr. Louis E. Phaneuf presiding. Dr. J. Fred Taussig, Professor of Clinical Obstetrics and Gynecology in the Washington University School of Medicine

spoke on "The Control of Abortion." Dr. Taussig stated that a careful analysis of statistics revealed that between 600,000 and 700,000 abortions occur each year in the United States, and that between 7,000 and 10,000 deaths annually are due to this cause. Control of this condition is necessary, but difficult because of the moral principles involved. Of the total number of abortions approximately 3 per cent are performed for therapeutic reasons, 30 per cent are spontaneous, and 66 per cent are illegally induced.

Preventive treatment is of the greatest importance in the control of spontaneous abortion, and should be directed to the elimination of germ plasm defects, correction of pelvic disorders, and control of systemic disease. One third of the cases of spontaneous abortion are due to defects in the ovum or spermatozoon, defects which may be eliminated or minimized by abolishing vitamin deficiencies, endocrine imbalance, prostatic disorders, or poor general nutrition. Correction of such pelvic disorders as ovarian cysts, leiomyomata uteri, septate uteri, infantile uteri, relaxed perineal floors, lacerated cervices, and retroversion of the uterus in many instances serves to prevent the occurrence of abortion. The correction of systemic abnormalities such as inflammation in the appendix or gallbladder, lowered sugar tolerance, or foci of infection is desirable before pregnancy. Since spontaneous abortion occurs in 10 per cent of all pregnancies, and usually within the first twelve weeks after conception, a thorough examination of patients in the first trimester is very important. Routine basal metabolic rate determinations, and Wassermann tests are desirable. Detailed histories of previous pregnancies to determine any tendency to abort should be taken. Patients of low fertility as indicated by failure to conceive after one year of intercourse without contraception are more apt to abort than women of normal fertility. The tendency to abort is much more marked in women who have experienced one or more abortions, as is indicated by the fact that abortions occur in approximately one of every five pregnancies in these patients as compared with the usual ratio of one in ten.

In cases showing a tendency to abort, care should be exercised to prevent too strenuous physical exercise, long automobile rides, constipation, and too frequent intercourse, particularly at those times when the menstrual period would have occurred if pregnancy had not intervened. Such measures as administration of corpus luteum extract or serum of normal pregnant women may be of some aid. The last two measures may serve to correct an endocrine imbalance which sensitizes the uterus and makes it hyperirritable. That such hyperirritability occurs is shown by the cases in which slight menstruation occurs after the onset of pregnancy.

A study of the underlying reasons why abortion was desired in a series of cases in Russia revealed poor economic status as the chief cause, while illegitimacy accounted for a third of the total number. Induced abortion by trained persons in hospitals or clinics causes maternal mortality in only one-fifteenth as many cases as when abortion is performed by irresponsible persons. In spite of this fact the sequelae of wholesale abortion have been so severe that the Russian government has discontinued indiscriminate abortion, and now performs abortion only in cases of physical disability, or in pregnancies occurring within nine months of a previous pregnancy. This government has undertaken the advocation of contraception as a preferable means of birth control.

Legislative control of abortion is far from satisfactory. Juries usually give acquittals in spite of absolute evidence of criminal abortion. Statutes are in need of revision. An example of their inadequacy is afforded by the laws of Massachusetts which make a physician liable to seven years' imprisonment if he interrupts pregnancy for any reason whatsoever (even though it be to save the mother's life), and to twenty years' imprisonment if the mother dies.

Dr. Taussig suggested that the number of illegally induced abortions would be materially reduced if the economic status of the families of the nation were improved. Bonuses, and tax exemptions may be of value in some cases, even though such measures have many undesirable features. He strongly advocated free maternal care during pregnancy and the puerperium in addition to that which is offered during the period of confinement.

The grave dangers of self-instrumentation should be firmly impressed upon the minds of all seeking abortion.

In the end, control of induced abortion will rest on the control of undesired pregnancies by contraceptive means. The contraceptive methods now at hand are not entirely satisfactory; when they become so, induced abortion will become an evil of the past.

DUNHAM LECTURES

Sir Frederick Gowland Hopkins, Professor of Biochemistry in the University of Cambridge, delivered the Dunham Lectures at the Harvard Medical School on October 6 and 8. The general subject of the lectures was "The Significance of Catalysis in Biology," and the first was devoted to a discussion of "The Catalytic Equipment of Micro-Organisms." Dr. Hopkins pointed out that although biological catalysts have been known to exist for over one hundred years, it is only within recent times that they have been shown to function within the cell, and to be active in life processes. A study of the catalytic systems of micro-organisms has served to bridge the gap in our knowledge concerning oxidations in simple organic systems and those occurring in respiratory cells.

Using living but nonproliferating cultures of bacteria, Dr. Hopkins and his associates studied the changes that occurred in the media. It was found

that the catalytic equipment of the bacteria was such as to allow the activation of intramolecular hydrogen, and also of the hydrogen molecule itself. The catalytic action of the dehydrogenases caused the reduction of one molecule (with the removal of a hydrogen ion), and a simultaneous (primary or secondary) oxidation of a second molecule. A characteristic feature of catalysis in the cell was shown to be the great importance of intermediate processes. Such intermediary processes are of more importance in higher organisms than in bacteria.

Some of the bacterial catalysts are present at all times, while others are absent unless the substances upon which they normally act are present in the media to enable growth. Enzymes in nonproliferating cells reach a state of thermodynamic equilibrium, proving the existence of true, uncomplicated catalysis.

Anerobic cultures were found to grow only if certain substances were present in combination. Processes of dehydrogenation furnish energy for such growth, the catalysts acting in some way upon the proteins and amino-acids present in the media.

The second lecture was on the subject "The Nature of Biocatalytic Systems in General." Certain enzymes are proteins, and have been prepared in crystalline form. Each enzyme is an individual protein molecule, and acts as an entire molecule, and not as any specific group of a molecule. Although there must be some fundamental difference between the protein molecule that is a catalyst, and one that is not a catalyst, the nature of this difference is at present unknown. It has been suggested that differences in the peptide chain may be responsible for this difference.

The fact that it is possible to "train" bacterial cultures to grow without substances which were essential for the growth of the original culture suggests that a new catalyst can be developed by such organisms. Variations in ability to develop new enzymes may play a very important rôle in adaptation of organisms to variations in environment.

Animal tissues contain many enzymes, and numerous co-enzymes. The former may be divided into two main classes, known as the dehydrogenases and the oxidases. There is no proof that either of these types is a protein molecule. The oxidases differ from the dehydrogenases by their greater affinity for their substrate.

In discussing the nature of co-enzymes, Dr. Hopkins pointed out that they are necessary to complete enzymatic systems. They probably function in successive stages of hydrogen transport. An illustration of such a co-enzymatic "transporter" was cited in the case of the substance "glutathione," a tripeptide of known composition. Hydrogen is passed through this substance to oxygen, thus allowing the oxidation of various molecules present in the system.

Although it is difficult to conceive of each dehydrogenation in living tissue being due to a specific enzyme, Dr. Hopkins emphasized the importance of the concept of enzymatic specificity.

THE ARLINGTON DOCTORS' CLUB

The regular meeting of the Arlington Doctors' Club will be held in the Nurses' Home, Symmes Arlington Hospital, Tuesday evening, November 10, at 8:30 p. m.

The speaker will be Dr. Howard M. Clute, Surgeon-in-Chief of the Massachusetts Memorial Hospitals.

His subject will be "Common Surgical Abdominal Emergencies."

The paper will be discussed by Dr. George P. Towle and Dr. Stephen G. Jones, Surgeons to the Symmes Arlington Hospital.

All physicians are invited to attend.

FRANK H. GERRY, *President*,
SIDNEY M. SIMONS, *Secretary*.

SOUTH END MEDICAL CLUB

The next regular meeting of the South End Medical Club will be held at the headquarters of the Boston Tuberculosis Association, 554 Columbus Avenue, Boston, on Tuesday, November 17, 1936, at 12 noon. The speaker will be Nathan Gorin, M.D., Associate Physician, Children's Hospital. His subject will be "Infant Feeding." All physicians are cordially welcome to attend.

WORCESTER DISTRICT MEDICAL SOCIETY

CHANGE OF DATE

The date of the November meeting of the Worcester District Medical Society has been changed from Wednesday, November 11, to Wednesday, November 18, 1936. This meeting will be held at the Grafton State Hospital. The subject for the paper will be announced at a later date.

ERWIN C. MILLER, M.D., *Secretary*.

GREATER BOSTON MEDICAL SOCIETY

There will be a meeting of the Greater Boston Medical Society on Tuesday, November 10, at the Beth Israel Hospital Auditorium, Boston, at 8 p. m.

PROGRAM

Effects of Protamine-Zinc-Insulin and Other Mixtures of Zinc and Insulin in Diabetes Mellitus. By I. M. Rabinowitch, M.D., D.Sc., C.M., F.R.C.P. (Can.) of Montreal. Assistant Professor of Medicine and Lecturer in Pathological Chemistry, McGill University Medical School.

H. A. KONTOFF, M.D., *President*,
D. B. STEARNS, M.D., *Secretary*.

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held in the Peter Bent Brigham Hospital Amphitheater (Shattuck Street Entrance), Tuesday evening, November 10, at 8:15 p. m.

PROGRAM

Presentation of Cases.

A Few High Lights in Harvard Medical History.

By Samuel Eliot Morison, Professor of History, Harvard University.

Medical students and physicians are cordially invited to attend.

MARSHALL N. FULTON, M.D., *Secretary.*

NEW ENGLAND HEART ASSOCIATION

The first meeting of the season of the New England Heart Association will be held in the auditorium of the Moseley Memorial Building of the Massachusetts General Hospital, Monday, November 9, 1936, at 8:15 p. m.

PROGRAM

1. Coronary Disease.
   The Speed of Healing of Myocardial Infarcts. Drs. Jorge Salcedo-Salgar, G. Kenneth Mallory, and Paul D. White.
   A New Record in Longevity after Coronary Thrombosis.
   A Woman 22 Years Old with Myocardial Infarction. Dr. Paul D. White.
   Coronary Disease Under the Age of Forty Years. Dr. R. E. Glendy.
2. The Effect of Inhalation of Tobacco Smoke on the Electrocardiogram. Dr. Ashton Graybiel.
3. The Heart Fifteen to Twenty Years after Severe Diphtheria. Dr. William Paul Thompson.
4. Electrocardiograms in Infancy, with Especial Reference to Lead 4. Dr. R. E. Glendy.
5. The Growing Importance of Cardiac Neurosis. Dr. Paul D. White.

All members of the New England Heart Association and interested physicians are invited to attend.

JAMES M. FAULKNER, M.D., *Secretary.*

SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

CALENDAR OF BOSTON DISTRICT FOR THE WEEK BEGINNING MONDAY, NOVEMBER 9, 1936

Monday, November 9—

*8.15 p. m. New England Heart Association. Auditorium of the Moseley Memorial Building, Massachusetts General Hospital.

Tuesday, November 10—

*9 a. m. - 10 a. m. Boston Dispensary, 25 Bennet Street, Boston. Some of the Newer Aspects of Cancer. Dr. William Shedden.

*12 m. - 1 p. m. Boston Society for the Advancement of Gastroenterology. Outpatient Building, Boston City Hospital.

8:00 p. m. Greater Boston Medical Society. Beth Israel Hospital Auditorium, Boston.

*8:15 p. m. Harvard Medical Society. Peter Bent Brigham Hospital Amphitheater (Shattuck Street entrance).

*8:30 p. m. The Arlington Doctors' Club. Nurses Home, Symmes Arlington Hospital.

Wednesday, November 11—

†12 m. Clinico-Pathological Conference. Children's Hospital Amphitheater.

1 p. m. - 5 p. m. Surgical Pathological Conference, Dr. Cutler and Dr. Wolbach, Peter Bent Brigham Hospital.

Thursday, November 12—

*8:30 a. m. - 9:30 a. m. Clinic, Surgical and Orthopedic Staffs of the Children's Hospital, at the Children's Hospital.

*9 a. m. - 10 a. m. Boston Dispensary, 25 Bennet Street, Boston. Acute Empyema Thoracis. Dr. J. W. Strieder.

12 m. Conference of Clinical Pathology, Boston City Hospital, Pathological Amphitheater.

2 p. m. - 6:30 p. m. Trudeau Society. New England Deaconess Hospital, Boston.

*3:30 p. m. Medical Clinic, Peter Bent Brigham Hospital. Dr. Henry A. Christian.

Friday, November 13—

*9 a. m. - 10 a. m. Boston Dispensary, 25 Bennet Street, Boston. The Prevention, Control and Treatment of Tuberculosis. Dr. Frederick T. Lord.

12 m. Massachusetts General Hospital. Clinical Meeting of the Staff of the Children's Medical Service. Ether Dome.

Saturday, November 14—

*9 a. m. - 10 a. m. Boston Dispensary, 25 Bennet Street, Boston. Hospital Case Presentation. Dr. S. J. Thannhauser.

*10 a. m. - 12 m. Staff Rounds at the Peter Bent Brigham Hospital. Conducted by Dr. Henry A. Christian.

*Open to the medical profession.
†Open to Fellows of the Massachusetts Medical Society.

November 5—Faulkner Hospital Clinical Meeting, at the Faulkner Hospital, 5 p. m.

November 6—William Harvey Society. See page 856, issue of October 29.

November 7—Health Developments in Massachusetts. See page 803, issue of October 22.

November 7—Massachusetts Conference of Social Work. See page 856, issue of October 29.

November 9—New England Heart Association. See page 899.

November 10—Boston Society for the Advancement of Gastroenterology. See page 856, issue of October 29.

November 10—Harvard Medical Society. See page 898.

November 10—Greater Boston Medical Society. See page 898.

November 10—The Arlington Doctors' Club. See page 898.

November 12—Trudeau Society. (Postponed Meeting.) See page 856, issue of October 29.

November 12—Pentucket Association of Physicians. Hotel Bartlett, 95 Main Street, Haverhill, at 8:30 p. m.

November 12—Conference of Clinical Pathology, the Boston City Hospital. See page 896.

November 12—Medical Clinic, Peter Bent Brigham Hospital. See page 896.

November 16—One hundredth anniversary of the founding of the Army Medical Library, 7th Street and Independence Avenue, S. W., Washington, D. C.

November 16—A Medical Historical Pageant. See page 896.

November 17—South End Medical Club. See page 898.

November 17-20—Southern Medical Association. See page 803, issue of October 22.

November 24—Massachusetts Society for Mental Hygiene. See page 803, issue of October 22.

December 3-5—Annual Conference of the National Society for the Prevention of Blindness, Columbus, Ohio.

March 30 - April 2, 1937—First International Conference on Fever Therapy. Postponement notice. See page 52, issue of July 2.

April 21-24, 1937—American Society for Experimental Pathology. See page 1075, issue of May 21.

DISTRICT MEDICAL SOCIETIES

FRANKLIN DISTRICT MEDICAL SOCIETY

Will meet at the Weldon in Greenfield at 11 a. m. the second Tuesdays of November, January, March and May.

CHARLES MOLINE, M.D., Secretary.
Sunderland.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

November 18—Bear Hill Golf Club, Stoneham.
January 13, 1937—Bear Hill Golf Club, Stoneham.
March 16, 1937—Danvers State Hospital, Danvers.
May 11, 1937—Bear Hill Golf Club, Stoneham.

KENNETH L. MACLACHLAN, M.D., Secretary.
1 Bellevue Avenue, Melrose.

NORFOLK DISTRICT MEDICAL SOCIETY

November 24—8:15 p. m. The Beth Israel Hospital. Communications and Case Presentations by the Staff. Principal subject—Cardiology. Details of program to be announced.

January 19, 1937—8:15 p. m. The Peter Bent Brigham Hospital. Communications and Case Presentations by the Staff. Suggested title—"Abdominal Pain from the Medical and Surgical Standpoint." Details of program to be announced.

February 23, 1937—Time, place and details of program to be announced.

March 30, 1937—8:15 p. m. New England Deaconess Hospital. A Symposium on Diabetes entitled "A Survey of the Diabetic Work of the George F. Baker Clinic in the New England Deaconess Hospital." Communications and Case Presentations by the Staff. Drs. Elliott P. Joslin, Howard F. Root, Priscilla White, Alexander Marble and Allen P. Joslin.

May, 1937—Annual Meeting. Details to be announced.

Note: The Censors will meet for the examination of candidates on the first Thursday of May, 1937. Fee of $10.00 is payable at the time of examination. Application blanks may be obtained by writing the Secretary, furnishing name, address and name of school of graduation in medicine. Application must be made at least three weeks prior to date of examination. Candidates whose applications are on file will receive proper notices.

FRANK S. CRUICKSHANK, M.D., Secretary.
1247 Beacon Street, Brookline.

PLYMOUTH DISTRICT MEDICAL SOCIETY

November 19—6 p. m. Goddard Hospital.

January 21, 1937—11 a. m. Bridgewater State Farm.

March 18, 1937—11 a. m. Brockton Hospital.

April 15, 1937—Annual Meeting. 11 a. m. Ducy Hospital.

May 20, 1937—11 a. m. Lakeville State Sanatorium.

FRED F. WEINER, M.D., Secretary.
231 Main Street, Brockton.

SUFFOLK DISTRICT MEDICAL SOCIETY

November 18, 1936—Boston Medical Library. 8:15 p. m. "Hydrocarbons and Cancer." Dr. M. J. Shear—U. S. P. H. Service. "Cancer Research. Recent Advances in Our Knowledge of Cancer." Dr. J. C. Aub. Discussion: Dr. J. W. Schereschewsky, U. S. P. H. Service, and Dr. R. B. Greenough.

January 27, 1937—Boston Medical Library. 8:15 p. m. Joint Meeting with the Boston Medical Library. "Anthropology." Dr. Carleton S. Coon.

March 31, 1937—Boston Medical Library. 8:15 p. m. "Social Insurance—It Affects the Medical Profession." Dr. Charles E. Mongan. Discussion: Dr. Channing Frothingham.

April 28, 1937—Annual Meeting. Boston Medical Library. 8:15 p. m. "Problems in Surgical Diagnosis." Dr. Howard M. Clute.

CONRAD WESSELHOEFT, M.D., President,
CHARLES C. LUND, M.D., Secretary.

WORCESTER DISTRICT MEDICAL SOCIETY

November 18. Note change of date. See page 898.

December 9—St. Vincent Hospital, Worcester, Mass. 6:15 p. m.: Dinner—complimentary by the hospital. 7:30 p. m.: Business session and scientific program.

January 13, 1937—Worcester City Hospital, Worcester, Mass. 6:15 p. m.: Dinner—complimentary by the hospital. 7:30 p. m.: Business session and scientific program.

February 10, 1937—Worcester State Hospital, Worcester, Mass. 6:15 p. m.: Dinner—complimentary by the hospital. 7:30 p. m.: Business session and scientific program.

March 10, 1937—The Memorial Hospital, Worcester, Mass. 6:15 p. m.: Dinner—complimentary by the hospital. 7:30 p. m.: Business session and scientific program.

April 14, 1937—Worcester Hahnemann Hospital, Worcester, Mass. 6:15 p. m.: Dinner—complimentary by the hospital. 7:30 p. m.: Business session and scientific program.

May 6, 1937—At 4:30 in the rooms of the Worcester Medical Library, Inc., at 34 Elm Street, Worcester, will be held the spring meeting of the Board of Censors.

Wednesday Afternoon and Evening, May 12, 1937—Annual Meeting. Time and place for this meeting will be announced in an early spring issue of the Journal.

ERWIN C. MILLER, M.D., Secretary.
27 Elm Street, Worcester.

BOOK REVIEWS

Minor Surgery. Frederick Christopher. Third Edition, Reset. 1030 pp. Philadelphia and London: W. B. Saunders Company. $10.00.

Christopher has brought this book thoroughly up to date in this, the third edition. He has added material on wound healing, bacteriophage, resuscitation upon the operating table, Elliott treatment of pelvic inflammatory disease, aspiration biopsy, Wangensteen stomach suction apparatus, lymphogranuloma inguinale, ileopectineal bursitis and many other subjects. A new section on the injection treatment of hernias appears.

The author carefully restricts himself to minor surgical subjects, conditions handled in an office or a clinic. Tumors, with the exception of those in the skin, call for but brief comment. Chest and abdominal surgery are considered major subjects. However, there are vast numbers of surgical conditions which are treated by nonoperative methods and these fill a large book.

Among the subjects rather fully discussed are burns, fractures, circulatory diseases, infections, diseases of the rectum and anus, diseases of the genitourinary organs, minor surgical technic and a whole chapter on the "surgical interne".

The book is well constructed, well illustrated and is an important addition to a surgeon's library.

Delafield and Prudden's Text-Book of Pathology. Revised by Francis Carter Wood. 1406 pp. Sixteenth Edition. Baltimore: William Wood & Company. $10.00.

The sixteenth edition of Delafield and Prudden's Text-Book of Pathology appears fifty-one years after the first edition. I know of no other textbook of pathology that has stood the test of time so well, largely owing to the indefatigable industry, power of objective description, and analytical ability of the authors. The recent editions, edited by Francis Carter Wood, have maintained the excellence of the earlier volumes.

Not an easy book for students to follow, the mass of information, the objectivity of the descriptions make it a most useful book for the practitioner interested in pathology and the practicing pathologist.

The illustrations are numerous and well chosen. Some of the newer aspects of pathology, particularly on the physiologic side, are neglected, but intentionally so.

Its 1406 pages make it ponderous, but it is difficult to see how it could be condensed further without sacrifice. The section on the nervous system has been more heavily revised than other sections as compared with the last edition.

The value of the work as a whole could be considerably enhanced if more references to the recent literature were included. Few pathologic laboratories can afford to be without this book.